Police Vehicle Evaluation

Model Year 2016

MICHIGAN STATE POLICE

NLECTC
National Law Enforcement and Corrections Technology Center

STATE OF MICHIGAN

Department of State Police

and

Department of Technology, Management and Budget

2016 Model Year

Police Vehicle Evaluation Program

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PREFACE

The Michigan State Police Vehicle Test Team is pleased to announce the results of the 2016 Model Year Police Vehicle Evaluation. This year we tested fifteen vehicles and five motorcycles. We appreciate your continued support and encouragement. The vehicles evaluated this year included the following:

POLICE CATEGORY

Chevrolet Caprice 3.6L RWD
Chevrolet Caprice 6.0L RWD
Chevrolet Impala 3.6L FWD
Chevrolet Tahoe 5.3L RWD
Chevrolet Tahoe 5.3L 4WD
Dodge Charger 3.6L 2.62 RWD
Dodge Charger 3.6L 3.08 RWD
Dodge Charger 5.7L 2.62 RWD
Dodge Charger 5.7L 3.08 AWD
Ford PI Sedan 3.5L FWD
Ford PI Sedan 3.7L AWD
Ford PI Sedan 3.5L Ecoboost AWD
Ford PI Sedan 2.0L Ecoboost FWD
Ford PI Utility 3.7L AWD
Ford PI Utility 3.5L Ecoboost AWD

MOTORCYCLES

BMW R 1200 RT-P
Can-AM Spyder F3
Harley-Davidson FLHTP (Electra Glide)
Harley-Davidson FLHP (Road King)
Zero DSP ZF12.5 ABS

GENERAL INFORMATION

All the cars were tested with a clean roof (no overhead light or light bar) and without “A” pillar mount spotlights. We believe this is the best way to ensure all of the vehicles are tested on an equal basis. Remember that once overhead lights, spotlights, radio antennas, sirens, and other emergency equipment are installed, overall performance may be somewhat lower than we report.

Each vehicle was tested with the tires that are available as original equipment on the production model. Specific tire information for each vehicle is available in the Vehicle Description portion of this report. All vehicles listed in this report were equipped with electronic speed limiters unless otherwise noted, or with the exception of certain motorcycles.

Motorcycles were tested with equipment installed as provided by their respective manufacturer. Harley-Davidson chose to test their bikes with minimal equipment. BMW, Can-AM, and Zero chose to test their bikes with the majority of the equipment installed. The Zero electric motorcycle made its first appearance to testing this year.

The manufacturers were allowed to submit a one-half page highlight of their vehicle. These highlights will be included with the vehicle description and photograph. This information is direct from the manufacturer and is not an opinion or endorsement from the Michigan State Police. It is only an attempt to give the consumer the most information about the vehicle.

Fiat Chrysler Automobiles (FCA) Proving Grounds - Acceleration, Top Speed, & Braking Tests

Acceleration and Top Speed tests were performed at the FCA Proving Grounds. This 4.7 mile 140 mph neutral steer banked oval provides ample space to obtain accurate test results in these areas.

The Brake test is also performed at the FCA Proving Grounds. This 1.56 mile concrete straightaway is completely flat, taking into consideration the curvature of the earth.

We would like to thank Mr. Greg Spicher and Mr. Craig Latta for the assistance we received from the staff at the FCA Proving Grounds.

Grattan Raceway - Motorcycle Dynamics Test

Motorcycle Dynamics testing was performed at Grattan Raceway. This two mile road course provides a taxing environment to test motorcycles in dynamics and continues to produce comprehensive results regarding durability and performance.

We appreciate the support we received from BMW, Can-AM/BRP, Harley-Davidson, and Zero during testing. This was the ninth year of motorcycle testing and we continue to get great feedback on this important component to the testing lineup.

Grattan Raceway - Vehicle Dynamics Test

Vehicle Dynamics testing was performed at Grattan Raceway. This two mile road course provides a realistic environment to test vehicles in dynamics and continues to produce comprehensive results regarding durability and performance.

We appreciate the support we received from Fiat Chrysler Automobiles (FCA), Ford Motor Company, and General Motors during testing.

EVALUATION INFORMATION

MOTORCYCLES:

New to testing this year is the first factory made electric police motorcycle, the Zero DSP ZF 12.5 with anti-lock brakes.

Grattan Raceway – Motorcycle Dynamics Test – Zero DSP ZF 12.5

During Motorcycle Dynamics testing, the motorcycle was allowed to charge between runs.

We recommend you review the information contained in this report and then apply it to the needs of your agency. This report is not an endorsement of products, but a means of learning what's available for your officers so they can do their job effectively and safely. If anything in this report requires further explanation or clarification, please call or write.

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ACKNOWLEDGEMENTS

We would like to thank the following contributors. We are grateful for their support and encouragement toward our ultimate goal: a safe, successful testing program that benefits the law enforcement community nationwide and beyond.

Colonel Kriste Kibbey Etue, Director, Michigan Department of State Police
Lt. Colonel W. Thomas Sands, Deputy Director, Field Services Bureau
Lt. Colonel Richard T. Arnold, Deputy Director, State Services Bureau
Lt. Colonel Gary M. Gorski, Deputy Director, Specialized Services Bureau
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Mr. Greg Spicher, Mr. Craig Latta and personnel from FCA Proving Grounds
Mr. Sam Faasen and personnel from Grattan Raceway Park

Photographs by Mr. Ray Holt, Michigan State Police
Vehicle Evaluation book prepared by Mrs. Tricia Steel, Michigan State Police Precision Driving Unit

The Michigan State Police Precision Driving Unit would like to extend a very special “thank you” to FCA, Ford Motor Company, General Motors, BMW Motorrad USA, BRP, Harley-Davidson Motorcycles, and Zero Motorcycles for their hard work in building and preparing the test cars and motorcycles. We are grateful for your dedication to law enforcement. Law enforcement officers rely on these vehicles to perform a vast array of duties.

Finally, thank you to all in the United States and Canada who represent law enforcement and purchasing agencies for your constant encouragement and support. We are proud to make a contribution to the law enforcement community.

Michigan State Police Vehicle Test Team:

Back Row: Mr. Steve Kline, Sgt. Mike McCarthy, Tpr. Jeff Mercer, Sgt. Rob Schwalm, Sgt. Doug Schutter, Ret. Sgt. David “Doc” Halliday, Tpr. Kelly Linebaugh, Mr. Dan McCarthy

Front Row: Tpr. Jim Gilmer, Lt. Ron Gromak, Sgt. Andy Douville, Mrs. Tricia Steel, F/Lt. Jim Flegel, Sgt. Matt Rogers, Tpr. Pat Agema

Not Pictured: Sgt. Marcus Trammel, Tpr. Nate Johnson, Tpr. Ben Schwalm, Mrs. Debbie Schrauben

TEST EQUIPMENT

The following test equipment is utilized during the Acceleration, Top Speed, Braking, and Vehicle Dynamics portions of the evaluation program.

Kistler Instrument Corp. 30280 Hudson Drive Novi, MI 48377	• DLS 1 Smart Sensor – Optical Non-Contact Speed & Distance Sensor • Kistler L-350 1 Axis Optical Sensor • Kistler CDS-GPS CGPSLA 100 hz Logger
Shoei Helmets 3002 Dow Avenue Suite 128 Tustin, CA 92780	• Motorcycle Helmet – Multi-Tech
AMB i.t. US-INC 1631 Phoenix Blvd. Suite 11 College Park, GA 30349	• AMB TranX Extended Loop Decoder • AMB TranX260 Transponders
Alpinestars USA 2780 W. 237th Street Torrance, CA 90505-5270	• Alpinestars Protective Riding Apparel
Stilo Helmets USA 9A Electronics Ave. Danvers, MA 01923	• Test Driver Helmet – WRC DES Composite
Motorola Solutions 1303 East Algonquin Road Schaumburg, IL 60196	• Mag One BPR 40 Two-Way Radios

TEST VEHICLE DESCRIPTIONS AND PHOTOGRAPHS

Chevrolet Caprice
3.6L RWD

MAKE & MODEL	2016 Chevrolet Caprice (9C1)
SALES CODE	1EW19
POWERTRAIN INFORMATION	
CUBIC INCHES	217
LITERS	3.6
HORSEPOWER SAENET	301 @ 6700 RPM
ALTERNATOR	170 AMP
TORQUE	265 @ 4800 RPM
BATTERY	AGM 700 CCA (Auxiliary also 700 CCA)
TRANSMISSION	6-Speed Automatic (Column Shift)
AXLE RATIO	2.92:1 (Optional Limited Slip, Rear-Wheel Drive)
STEERING	Electric Power-Assisted Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38 Feet
TIRE SIZE, LOAD & SPEED RATING	Goodyear RSA P235/50/R18, Load Rating 99, W Speed Rating
GROUND CLEARANCE, MINIMUM	6.0 inches
BRAKE SYSTEM	Power 4-Wheel anti-lock heavy duty disc, Police Calibration
FUEL CAPACITY	19.0 Gallons/72.0 Liters
GENERAL MEASUREMENTS	
WHEELBASE	118.5 inches
LENGTH	204.2 inches
CURB WEIGHT	4,043 lbs.
HEIGHT	58.7 inches
INTERIOR VOLUME	
FRONT	56.0 cu. ft.
REAR	56.0 cu. ft.
COMB	112.0 cu. ft
TRUNK	17.4 cu. ft. (includes full-size spare tire)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,182 lbs.
EPA MILEAGE EST. (MPG)	
CITY	18
HIGHWAY	26
COMBINED	21

MANUFACTURER VEHICLE HIGHLIGHTS

The Chevrolet Caprice PPV is the ultimate police sedan available in today's market. When it comes to overall size, performance, and officer comfort, Caprice is in a class by itself.

Under the hood, Caprice offers two outstanding powertrains including our 3.6L SIDI DOHC V6, as well as our 6.0L V8 that comes as a no-cost option. The V6-powered Caprice produces just over 300 horsepower and returns up to 26 mpg on the highway, striking an excellent balance of power and efficiency. With its rear-wheel drive configuration, precise steering, and outstanding brakes, Caprice also has the dynamics to match the power up front.

Inside, Caprice boasts 112 cu. ft. of interior volume making it the largest sedan in the market. Officers will find a high level of comfort, connectivity, and safety behind the wheel as well. Standard Bluetooth[1] streaming audio and cell phone connectivity keep officers' eyes on the road, while an all-new standard Rear Vision Camera helps to improve visibility in backing situations and reduce collisions. And with the flip of a customer supplied switch, the standard Surveillance Mode allows officers to turn the Caprice into a stealth-like cruiser with nearly all interior lighting completely darkened. Caprice also boasts an industry-exclusive, front-only head side curtain airbag and is the only police sedan to offer a factory-installed auxiliary battery.

Backed by a 5-year/100,000-mile limited powertrain warranty[2] and a 2-year/24,000-mile scheduled maintenance program[3], the Caprice cements itself as the elite choice for law enforcement.

[1] Go to gmtotalconnect.com to find out which phones are compatible with the vehicle.
[2] Whichever comes first. See dealer for limited warranty details.
[3] Covers only scheduled oil changes with filter, tire rotations and 27-point inspections according to your new vehicle's recommended maintenance schedule for up to 2 years or 24,000 miles, whichever comes first. Does not include air filters. Maximum of 4 service events. See participating dealer for other restrictions and complete details.

Chevrolet Caprice
6.0L RWD

MAKE & MODEL	2016 Chevrolet Caprice (9C1)
SALES CODE	1EW19
POWERTRAIN INFORMATION	
CUBIC INCHES	364
LITERS	6.0
HORSEPOWER SAENET	355 @ 5300 RPM
ALTERNATOR	170 AMP
TORQUE	384 @ 4400 RPM
BATTERY	AGM 700 CCA (Optional Auxiliary 700 CCA)
TRANSMISSION	6-Speed Automatic (Column Shift)
AXLE RATIO	2.92:1 (Limited Slip, Rear-Wheel Drive)
STEERING	Electric Power-Assisted Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38 Feet
TIRE SIZE, LOAD & SPEED RATING	Goodyear RSA P235/50/R18, Load Rating 99, W Speed Rating
GROUND CLEARANCE, MINIMUM	6.0 inches
BRAKE SYSTEM	Power 4-Wheel anti-lock heavy duty disc, Police Calibration
FUEL CAPACITY	19.0 Gallons/72.0 Liters
GENERAL MEASUREMENTS	
WHEELBASE	118.5 inches
LENGTH	204.2 inches
CURB WEIGHT	4,162 lbs.
HEIGHT	58.7 inches
INTERIOR VOLUME	
FRONT	56.0 cu. ft.
REAR	56.0 cu. ft.
COMB	112 cu. ft
TRUNK	17.4 cu. ft. (includes full-size spare tire)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,173 lbs.
EPA MILEAGE EST. (MPG)	
CITY	15
HIGHWAY	24
COMBINED	18

MANUFACTURER VEHICLE HIGHLIGHTS

The Chevrolet Caprice PPV is the ultimate police sedan available in today's market. When it comes to overall size, performance, and officer comfort, Caprice is in a class by itself.

Under the hood, Caprice offers two outstanding powertrains including our 3.6L SIDI DOHC V6, as well as our 6.0L V8 with 355 horsepower that comes as a no-cost option. The V8-powered Caprice achieved a top speed of 156 mph at the 2015 Model Year Michigan State Police Vehicle Evaluation making it the best of any police-rated product. With its rear-wheel drive configuration, precise steering, and outstanding brakes, Caprice also has the dynamics to match the power up front.

Inside, Caprice boasts 112 cu. ft. of interior volume making it the largest sedan in the market. Officers will find a high level of comfort, connectivity, and safety behind the wheel as well. Standard Bluetooth[1] streaming audio and cell phone connectivity keep officers' eyes on the road, while an all-new standard Rear Vision Camera helps to improve visibility in backing situations and reduce collisions. And with the flip of a customer supplied switch, the standard Surveillance Mode allows officers to turn the Caprice into a stealth-like cruiser with nearly all interior lighting completely darkened. Caprice also boasts an industry-exclusive, front-only head side curtain airbag and is the only police sedan to offer a factory-installed auxiliary battery.

Backed by a 5-year/100,000-mile limited powertrain warranty[2] and a 2-year/24,000-mile scheduled maintenance program[3], the Caprice cements itself as the elite choice for law enforcement.

[1] Go to gmtotalconnect.com to find out which phones are compatible with the vehicle.
[2] Whichever comes first. See dealer for limited warranty details.
[3] Covers only scheduled oil changes with filter, tire rotations and 27-point inspections according to your new vehicle's recommended maintenance schedule for up to 2 years or 24,000 miles, whichever comes first. Does not include air filters. Maximum of 4 service events. See participating dealer for other restrictions and complete details.

Chevrolet Impala
3.6L FWD

MAKE & MODEL	2016 Chevrolet Impala Limited (9C1)
SALES CODE	1WS19
POWERTRAIN INFORMATION	
CUBIC INCHES	217
LITERS	3.6
HORSEPOWER SAENET	302 @ 6800 RPM
ALTERNATOR	170 AMP
TORQUE	262 @ 5300 RPM
BATTERY	720 CCA
TRANSMISSION	6-Speed Automatic
AXLE RATIO	2.44:1 (Front-Wheel Drive)
STEERING	Power Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38 Feet
TIRE SIZE, LOAD & SPEED RATING	Goodyear A/S P235/55/R17, Load Rating 98, W Speed Rating
GROUND CLEARANCE, MINIMUM	6.5 inches
BRAKE SYSTEM	Power 4-Wheel anti-lock disc, H/D front pads with Police Calibration
FUEL CAPACITY	17.5 Gallons/66.2 Liters
GENERAL MEASUREMENTS	
WHEELBASE	110.5 inches
LENGTH	200.4 inches
CURB WEIGHT	3,736 lbs.
HEIGHT	58.7 inches
INTERIOR VOLUME	
FRONT	56.6 cu. ft.
REAR	48.2 cu. ft.
COMB	105 cu. ft
TRUNK	18.6 cu. ft. (15.9 cu. ft. with full-size spare)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,140 lbs.
EPA MILEAGE EST. (MPG)	
CITY	17
HIGHWAY	28
COMBINED	21

MANUFACTURER VEHICLE HIGHLIGHTS

The Chevrolet Impala Limited Police Package (9C1) offers full-size car utility with mid-size agility. It features competitive interior roominess for officer comfort (105 cu. ft. of interior volume) and also a large trunk to accommodate a great deal of police equipment (up to 18.6 cu. ft. of trunk volume).

With its front-wheel drive configuration, Impala offers excellent all-weather traction to get officers through snow and rain. Impala also boasts tremendous efficiency with the best highway fuel economy of any police product with an EPA estimate of 28 mpg.

Performance is also very strong thanks to a 3.6L SIDI DOHC V6 with over 300 horsepower underneath the hood. That strong power yields outstanding acceleration and top speed. In fact, the Impala achieved a top speed of 150 mph at the 2015 Model Year Michigan State Police Vehicle Evaluation.

The Impala comes with a standard 5-year/100,000-mile limited powertrain warranty[1], and a standard 2-year/24,000-mile scheduled maintenance program[2]. Couple all of these attributes with the lowest MSRP of any police-rated product in the market, and Impala becomes an unbeatable value for any law enforcement agency. It is available in both marked and undercover patrol configurations.

[1]Whichever comes first. See dealer for limited warranty details.
[2]Covers only scheduled oil changes with filter, tire rotations and 27-point inspections according to your new vehicle's recommended maintenance schedule for up to 2 years or 24,000 miles, whichever comes first. Does not include air filters. Maximum of 4 service events. See participating dealer for other restrictions and complete details.

Chevrolet Tahoe
5.3L RWD

MAKE & MODEL	2016 Chevrolet Tahoe RWD (9C1)
SALES CODE	CC15706
POWERTRAIN INFORMATION	
CUBIC INCHES	325
LITERS	5.3
HORSEPOWER SAENET	355 @ 5600 RPM
ALTERNATOR	170 AMP
TORQUE	383 @ 4100 RPM
BATTERY	720 CCA Primary (730 CCA Auxiliary)
TRANSMISSION	6-Speed Automatic
AXLE RATIO	3.08:1 (Rear-Wheel Drive with Heavy-Duty Locking Rear Differential)
STEERING	Electric Power-Assisted Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	39 Feet
TIRE SIZE, LOAD & SPEED RATING	Goodyear RSA P265/60/R17, All-season Load Rating 108, V Speed Rating
GROUND CLEARANCE, MINIMUM	8.5 inches
BRAKE SYSTEM	Heavy Duty 4-Wheel Anti-lock front & rear disc with Vacuum boost
FUEL CAPACITY	26 Gallons/98 Liters
GENERAL MEASUREMENTS	
WHEELBASE	116 inches
LENGTH	204 inches
CURB WEIGHT	5,224 lbs.
HEIGHT	72.4 inches
INTERIOR VOLUME	
FRONT	63.8 cu. ft.
REAR	56.9 cu. ft.
COMB	120.7 cu. ft
MAX CARGO AREA	111.8 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,576 lbs. with 40/40 front seats (no center seat)
EPA MILEAGE EST. (MPG)	
CITY	16
HIGHWAY	23
COMBINED	18

MANUFACTURER VEHICLE HIGHLIGHTS

The Tahoe PPV remains the only full-size, body-on-frame, pursuit-rated cruiser in the market. It provides excellent officer comfort, visibility, cargo capacity, up-fit capability, and true utility.

Tahoe interior showcases office-like ergonomics, innovative technologies, and a host of safety features to keep officers safe and connected behind the wheel. Standard are a Rear Vision Camera with backup sensors and Bluetooth[1] cell phone connectivity.

Just like before, the Tahoe PPV offers full pursuit capability with tremendous power, speed, braking, and agility. The 5.3L EcoTec3 V8 under the hood features direct injection, variable valve timing, and Active Fuel Management. It produces 355 horsepower (an increase of 35 over the last model) and 383 lb-ft of torque (an increase of 48 over the last model), all while yielding better gas mileage than the engine it replaced (up to 23 highway mpg). Also standard are dual batteries to handle the electrical draw of emergency equipment, and a tow package capable of up to 4,000 lbs. of tow capacity[2].

Now available with optional 17" polished aluminum wheel for retail style aesthetics.

Whether it's high-speed emergency vehicle operations, city patrol, HAZMAT, K-9 unit, medical first responder, or tactical operations, the 2016 Tahoe PPV reaffirms that the SUV is thriving and ready for duty.

[1] Vehicle must be equipped with OnStar, but does not require OnStar subscription. Go to gmtotalconnect.com to find out which phones are compatible with the vehicle.
[2] Maximum trailer weight ratings are calculated assuming a properly equipped base vehicle, except for any option(s) necessary to achieve the rating, plus driver. The weight of other optional equipment, passengers, and cargo will reduce the maximum trailer weight your vehicle can tow.

Chevrolet Tahoe
5.3L 4WD

MAKE & MODEL	2016 Chevrolet Tahoe 4WD (9C1)
SALES CODE	CK15706
POWERTRAIN INFORMATION	
CUBIC INCHES	325
LITERS	5.3
HORSEPOWER SAENET	355 @ 5600 RPM
ALTERNATOR	170 AMP
TORQUE	383 @ 4100 RPM
BATTERY	720 CCA Primary (730 CCA Auxiliary)
TRANSMISSION	6-Speed Automatic
AXLE RATIO	3.08:1 Driver- Selectable Auto Four-Wheel Drive, Four-Wheel, or Two-Wheel Drive (standard Heavy-Duty Locking Rear Differential)
STEERING	Electric Power-Assisted Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	39 Feet
TIRE SIZE, LOAD & SPEED RATING	Goodyear RSA P265/60/R17, All-season Load Rating 108, V Speed Rating
GROUND CLEARANCE, MINIMUM	8.5 inches
BRAKE SYSTEM	Heavy Duty 4-Wheel Anti-lock front & rear disc with Vacuum boost
FUEL CAPACITY	26 Gallons/98 Liters
GENERAL MEASUREMENTS	
WHEELBASE	116 inches
LENGTH	204 inches
CURB WEIGHT	5,476 lbs.
HEIGHT	72.4 inches
INTERIOR VOLUME	
FRONT	63.8 cu. ft.
REAR	56.9 cu. ft.
COMB	120.7 cu. ft
MAX CARGO AREA	111.8 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,624 lbs. with 40/40 front seats (no center seat)
EPA MILEAGE EST. (MPG)	
CITY	16
HIGHWAY	22
COMBINED	18

MANUFACTURER VEHICLE HIGHLIGHTS

The Tahoe PPV remains the only full-size, body-on-frame, pursuit-rated cruiser in the market. It provides excellent officer comfort, visibility, cargo capacity, up-fit capability, and true utility. Riding at the identical height as 2WD models with matching brakes and tires, the Tahoe PPV 4WD can travel wherever the pursuit takes you.

Tahoe interior showcases office-like ergonomics, innovative technologies, and a host of safety features to keep officers safe and connected behind the wheel. Standard are a Rear Vision Camera with backup sensors and Bluetooth[1] cell phone connectivity.

The 5.3L EcoTec3 V8 features direct injection, variable valve timing, and Active Fuel Management. It produces 355 horsepower (an increase of 35 over the last model) and 383 lb-ft of torque (an increase of 48 over the last model), all while yielding better gas mileage than the engine it replaced (up to 22 highway mpg). Also standard are dual batteries to handle the electrical draw of emergency equipment, and a tow package capable of up to 4,000 lbs. of tow capacity[2].

Now available with optional 17" polished aluminum wheel for retail style aesthetics.

Whether it's high-speed emergency vehicle operations, city patrol, HAZMAT, K-9 unit, medical first responder, or tactical operations, the 2016 Tahoe PPV 4WD reaffirms that the SUV is thriving and ready for duty.

[1] Vehicle must be equipped with OnStar, but does not require OnStar subscription. Go to gmtotalconnect.com to find out which phones are compatible with the vehicle.
[2] Maximum trailer weight ratings are calculated assuming a properly equipped base vehicle, except for any option(s) necessary to achieve the rating, plus driver. The weight of other optional equipment, passengers, and cargo will reduce the maximum trailer weight your vehicle can tow.

Dodge Charger
3.6L 2.62 RWD

MAKE & MODEL	2016 Dodge Charger RWD
SALES CODE	27A, DLL
POWERTRAIN INFORMATION	
CUBIC INCHES	220
LITERS	3.6
HORSEPOWER SAENET	292 @ 6400 RPM
ALTERNATOR	220 AMP
TORQUE	260 @ 4400 RPM
BATTERY	800 CCA
TRANSMISSION	5-Speed Electronic Automatic
AXLE RATIO	2.62
STEERING	Rack-and-Pinion with Electric Power Assist
TURNING CIRCLE (CURB TO CURB)	37.7 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, 4 Channel Anti-Lock
FUEL CAPACITY	18.5 Gallons/70.03 Liters
GENERAL MEASUREMENTS	
WHEELBASE	120.2 inches
LENGTH	198.4 inches
CURB WEIGHT	4,098 lbs.
HEIGHT	58.4 inches
INTERIOR VOLUME	
FRONT	55.6 cu. ft.
REAR	49.31 cu. ft.
COMB	104.7 cu. ft.
TRUNK	16.5 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,190 lbs.
EPA MILEAGE EST. (MPG)	
CITY	17
HIGHWAY	26
COMBINED	20

MANUFACTURER VEHICLE HIGHLIGHTS

The newly redesigned 2016 Dodge Charger Pursuit boasts an all-new, industry-exclusive cockpit design with an optional 12.1-inch touch-screen display. This touch-screen display includes Uconnect® infotainment system with standard Bluetooth®. New larger screen allows the laptop to be stored in the trunk, reducing interior clutter for safety and increased productivity. The police integrated display package responds to officers' demands for tactical advantages and safety. Vehicle Systems Interface Module (standard) enables easier upfits by providing upfitters with access to the electrical architecture of the vehicle.

Improved fuel economy is achieved through expertly tuned steering performance from the all-new electric power steering (EPS) system. The 2016 Dodge Charger Pursuit features a standard *Ward's* "Automotive 10 Best" Pentastar® V6 engine with Decel Fuel Shut-Off feature that provides a unique balance of pursuit-rated performance and V6 efficiency, including Flex-Fuel capability.

Purpose-built upgrades include performance-tuned suspension, load-leveling shocks and beefed-up, heavy-duty brakes. Additional officer-focused upgrades include specially developed seats to accommodate belt-mounted gear, a sport steering wheel with auxiliary buttons for controlling police equipment and an I/P-mounted gear shifter that frees up the center console for police-specific controls.

Dodge Charger
3.6L 3.08 RWD

MAKE & MODEL	2016 Dodge Charger RWD
SALES CODE	27A, DMM
POWERTRAIN INFORMATION	
CUBIC INCHES	220
LITERS	3.6
HORSEPOWER SAENET	292 @ 6400 RPM
ALTERNATOR	220 AMP
TORQUE	260 @ 4400 RPM
BATTERY	800 CCA
TRANSMISSION	5-Speed Electronic Automatic
AXLE RATIO	3.08
STEERING	Rack-and-Pinion with Electric Power Assist
TURNING CIRCLE (CURB TO CURB)	37.7 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, 4 Channel Anti-Lock
FUEL CAPACITY	18.5 Gallons/70.03 Liters
GENERAL MEASUREMENTS	
WHEELBASE	120.2 inches
LENGTH	198.4 inches
CURB WEIGHT	4,098 lbs.
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MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,190 lbs.
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The newly redesigned 2016 Dodge Charger Pursuit boasts an all-new, industry-exclusive cockpit design with an optional 12.1-inch touch-screen display. This touch-screen display includes Uconnect® infotainment system with standard Bluetooth®. New larger screen allows the laptop to be stored in the trunk, reducing interior clutter for safety and increased productivity. The police integrated display package responds to officers' demands for tactical advantages and safety. Vehicle Systems Interface Module (standard) enables easier upfits by providing upfitters with access to the electrical architecture of the vehicle.

Improved fuel economy is achieved through expertly tuned steering performance from the all-new electric power steering (EPS) system. The 2016 Dodge Charger Pursuit features a standard *Ward's* "Automotive 10 Best" Pentastar® V6 engine with Decel Fuel Shut-Off feature that provides a unique balance of pursuit-rated performance and V6 efficiency, including Flex-Fuel capability.

Purpose-built upgrades include performance-tuned suspension, load-leveling shocks and beefed-up, heavy-duty brakes. Additional officer-focused upgrades include specially developed seats to accommodate belt-mounted gear, a sport steering wheel with auxiliary buttons for controlling police equipment and an I/P-mounted gear shifter that frees up the center console for police-specific controls.

Dodge Charger
5.7L 2.62 RWD

MAKE & MODEL	2016 Dodge Charger RWD
SALES CODE	29A, 5ZV
POWERTRAIN INFORMATION	
CUBIC INCHES	345
LITERS	5.7
HORSEPOWER SAENET	370 @ 5150 RPM
ALTERNATOR	220 AMP
TORQUE	397 @ 4250 RPM
BATTERY	800 CCA
TRANSMISSION	5-Speed Electronic Automatic
AXLE RATIO	2.62
STEERING	Rack-and-Pinion with Electric Power Assist
TURNING CIRCLE (CURB TO CURB)	37.7 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, 4 Channel Anti-Lock
FUEL CAPACITY	18.5 Gallons/70.03 Liters
GENERAL MEASUREMENTS	
WHEELBASE	120.2 inches
LENGTH	198.4 inches
CURB WEIGHT	4,325 lbs.
HEIGHT	58.4 inches
INTERIOR VOLUME	
FRONT	55.6 cu. ft.
REAR	49.31 cu. ft.
COMB	104.7 cu. ft.
TRUNK	16.5 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,200 lbs.
EPA MILEAGE EST. (MPG)	
CITY	15
HIGHWAY	25
COMBINED	18

MANUFACTURER VEHICLE HIGHLIGHTS

Newly redesigned, the 2016 Dodge Charger Pursuit features an all-new, industry-exclusive cockpit design with an optional 12.1-inch touch-screen, which enables officers to store their laptop in the trunk, reducing interior clutter for safety and increased productivity. Larger touch-screen display includes the Uconnect® infotainment system with standard Bluetooth®. Police integrated display package responds to officers' demands for tactical advantages and safety. Vehicle Systems Interface Module (standard) enables easier upfits by providing upfitters with access to the electrical architecture of the vehicle.

An all-new electric power steering (EPS) system improves fuel economy via an expertly tuned steering performance. A nimble ride and controlled feel is achieved through its RWD design, which mitigates weight shift, enabling faster acceleration, more responsive handling and maneuverability. Power under the hood comes from the legendary 5.7L HEMI® V8 engine. Its Variable Valve Timing (VVT) increases power output without sacrificing fuel economy through continuous adjusting of the camshaft tuning.

The 2016 Dodge Charger Pursuit RWD boasts a performance-tuned suspension, load-leveling NIVOMAT shocks, heavy-duty antilock vented-disc brakes, front and rear stabilizer bars, and two-mode police-specific Electronic Stability Control (ESC). Additional officer-focused upgrades include specifically developed seats to accommodate belt-mounted gear and a sport steering wheel with auxiliary buttons for controlling police equipment.

Dodge Charger
5.7L 3.08 AWD

MAKE & MODEL	2016 Dodge Charger AWD
SALES CODE	29A, 590
POWERTRAIN INFORMATION	
CUBIC INCHES	345
LITERS	5.7
HORSEPOWER SAENET	370 @ 5150 RPM
ALTERNATOR	220 AMP
TORQUE	397 @ 4250 RPM
BATTERY	800 CCA
TRANSMISSION	5-Speed Electronic Automatic
AXLE RATIO	3.08
STEERING	Rack-and-Pinion with Electro-Hydraulic Power Assist
TURNING CIRCLE (CURB TO CURB)	38.7 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, 4 Channel Anti-Lock
FUEL CAPACITY	18.5 Gallons/70.03 Liters
GENERAL MEASUREMENTS	
WHEELBASE	120.2 inches
LENGTH	198.4 inches
CURB WEIGHT	4,520 lbs.
HEIGHT	58.4 inches
INTERIOR VOLUME	
FRONT	55.6 cu. ft.
REAR	49.31 cu. ft.
COMB	104.7 cu. ft.
TRUNK	16.5 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,000 lbs.
EPA MILEAGE EST. (MPG)	
CITY	15
HIGHWAY	23
COMBINED	18

MANUFACTURER VEHICLE HIGHLIGHTS

The newly redesigned 2016 Dodge Charger Pursuit is equipped with an all-new, industry-exclusive cockpit design. Its optional 12.1-inch video display touch-screen enables officers to keep their laptops out of the center console, which reduces clutter and increases safety and productivity. The touch-screen display includes Uconnect® infotainment system with a standard Bluetooth®. The police integrated display package responds to officers' demand for tactical advantages and safety. Vehicle Systems Interface Module (standard) enables easier upfits by providing upfitters with access to the electrical architecture of the vehicle.

The 2016 Dodge Charger Pursuit's advanced all-wheel-drive system transitions seamlessly from RWD to AWD, resulting in more control for officers. The segment-exclusive active transfer case and front-axle disconnect system monitor and adapt to environmental/road conditions, vehicle mode and driver habits. The 2016 Dodge Charger Pursuit AWD boasts added traction, improved acceleration and optimum cornering balance.

The 5.7L HEMI® V8 engine features Variable Valve Timing (VVT), which increases power output without sacrificing fuel economy through continuous adjusting of the camshaft tuning based on the level of performance required. Purpose-built features include specially developed seats that accommodate belt-mounted gear and a sport steering wheel with auxiliary buttons for controlling police equipment.

Ford PI Sedan
3.5L FWD

MAKE & MODEL	2016 Ford Police Interceptor Sedan FWD
SALES CODE	P2L, 998
POWERTRAIN INFORMATION	
CUBIC INCHES	214
LITERS	3.5
HORSEPOWER SAENET	288 @ 6500 RPM
ALTERNATOR	220 AMP
TORQUE	254 @ 4000 RPM
BATTERY	750 CCA
TRANSMISSION	6-Speed Electronic Automatic
AXLE RATIO	3.16:1
STEERING	Electric Power Assist Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38.4 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	6.0 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, ABS
FUEL CAPACITY	19 Gallons/71.9 Liters
GENERAL MEASUREMENTS	
WHEELBASE	112.9 inches
LENGTH	202.9 inches
CURB WEIGHT	4, 212 lbs.
HEIGHT	61.3 inches
INTERIOR VOLUME	
FRONT	54.8 cu. ft.
REAR	48.1 cu. ft.
COMB	103.0 cu. ft.
TRUNK	16.6 cu. ft. (with standard full size spare)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,280 lbs.
EPA MILEAGE EST. (MPG)	
CITY	17
HIGHWAY	25
COMBINED	20

MANUFACTURER VEHICLE HIGHLIGHTS

#1 PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY and 2015CY[1]

NEW FEATURES & CHANGES:

- VIN specific payload rating 1280lbs
- Improved seating material for improved durability, ingress and egress (Late running change in 2015MY) - Standard
- Rear Camera (viewable in 4" center stack) - Standard
- Rear Camera (viewable in Rear View Mirror) - No charge option
- Tail Lamp Prep Housing Kit - Available
- Redundant trunk lid release switch located in overhead console - Standard

SAFETY:

- Tested for three years in a row by MSP and LASD with Traction Control and Stability Control safety systems full on, as driven by officers in the real world
- Industry Exclusive 75mph Rear Crash
- Ultra High Strength Boron Steel Safety Cell Construction
- Level III NIJ ballistic panels - Certified for LAPD special threat rounds - Available
- Anti-Stab plates in seat backs - Standard

DURABILITY:

- Two times durability testing

1. The 2015CY is based upon Polk Registration data as of May 2015

Ford PI Sedan
3.7L AWD

MAKE & MODEL	2016 Ford Police Interceptor Sedan AWD
SALES CODE	P2M, 99K
POWERTRAIN INFORMATION	
CUBIC INCHES	226
LITERS	3.7
HORSEPOWER SAENET	305 @ 6500 RPM
ALTERNATOR	220 AMP
TORQUE	279 @ 4000 RPM
BATTERY	750 CCA
TRANSMISSION	6-Speed Electronic Automatic
AXLE RATIO	3.39:1 with All-Wheel Drive
STEERING	Electric Power Assist Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38.4 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	6.0 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, ABS
FUEL CAPACITY	19 Gallons/71.9 Liters
GENERAL MEASUREMENTS	
WHEELBASE	112.9 inches
LENGTH	202.9 inches
CURB WEIGHT	4,311 lbs.
HEIGHT	61.3 inches
INTERIOR VOLUME	
FRONT	54.8 cu. ft.
REAR	48.1 cu. ft.
COMB	103.0 cu. ft.
TRUNK	16.6 cu. ft. (with standard full size spare)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,340 lbs.
EPA MILEAGE EST. (MPG)	
CITY	16
HIGHWAY	22
COMBINED	18

MANUFACTURER VEHICLE HIGHLIGHTS

#1 PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY and 2015CY[1]

NEW FEATURES & CHANGES:

- VIN specific payload rating 1340lbs (BIC)
- Improved seating material for improved durability, ingress and egress (Late running change in 2015MY) - Standard
- Rear Camera (viewable in 4" center stack) - Standard
- Rear Camera (viewable in Rear View Mirror) - No charge option
- Tail Lamp Prep Housing Kit - Available
- Redundant trunk lid release switch located in overhead console - Standard

SAFETY:

- Tested for three years in a row by MSP and LASD with Traction Control and Stability Control safety systems full on, as driven by officers in the real world
- Industry Exclusive 75mph Rear Crash
- Ultra High Strength Boron Steel Safety Cell Construction
- Level III NIJ ballistic panels - Certified for LAPD special threat rounds - Available
- Anti-Stab plates in seat backs - Standard

DURABILITY:

- Two times durability testing

PERFORMANCE:

- Standard Full-Time AWD

1. The 2015CY is based upon Polk Registration data as of May 2015

Ford PI Sedan
3.5L Ecoboost AWD

MAKE & MODEL	2016 Ford Police Interceptor Sedan Ecoboost AWD
SALES CODE	P2M, 99T
POWERTRAIN INFORMATION	
CUBIC INCHES	214
LITERS	3.5
HORSEPOWER SAENET	365 @ 5500 RPM
ALTERNATOR	220 AMP
TORQUE	350 @ 1500-5250 RPM
BATTERY	750 CCA
TRANSMISSION	6-Speed Electronic Automatic
AXLE RATIO	3.16:1 with All-Wheel Drive
STEERING	Electric Power Assist Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38.4 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	5.3 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, ABS
FUEL CAPACITY	19 Gallons/71.9 Liters
GENERAL MEASUREMENTS	
WHEELBASE	112.9 inches
LENGTH	202.9 inches
CURB WEIGHT	4,371 lbs.
HEIGHT	61.3 inches
INTERIOR VOLUME	
FRONT	54.8 cu. ft.
REAR	48.1 cu. ft.
COMB	103.0 cu. ft.
TRUNK	16.6 cu. ft. (with standard full size spare)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,220 lbs.
EPA MILEAGE EST. (MPG)	
CITY	15
HIGHWAY	22
COMBINED	18

MANUFACTURER VEHICLE HIGHLIGHTS

#1 PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY and 2015CY[1]

NEW FEATURES & CHANGES:

- VIN specific payload rating 1220lbs
- Improved seating material for improved durability, ingress and egress (Late running change in 2015MY) - Standard
- Rear Camera (viewable in 4" center stack) - Standard
- Rear Camera (viewable in Rear View Mirror) - No charge option
- Tail Lamp Prep Housing Kit - Available
- Redundant trunk lid release switch located in overhead console - Standard

SAFETY:

- Tested for three years in a row by MSP and LASD with Traction Control and Stability Control safety systems full on, as driven by officers in the real world
- Industry Exclusive 75mph Rear Crash
- Ultra High Strength Boron Steel Safety Cell Construction
- Level III NIJ ballistic panels - Certified for LAPD special threat rounds - Available
- Anti-Stab plates in seat backs – Standard

DURABILITY:

- Two times durability testing

PERFORMANCE:

- Standard Full-Time AWD

1. The 2015CY is based upon Polk Registration data as of May 2015

Ford PI Sedan
2.0L Ecoboost FWD

MAKE & MODEL	2016 Ford Special Service Police Ecoboost Sedan FWD
SALES CODE	P2L, 999
POWERTRAIN INFORMATION	
CUBIC INCHES	122
LITERS	2.0
HORSEPOWER SAENET	240 @ 5500 RPM
ALTERNATOR	200 AMP
TORQUE	270 @ 3000 RPM
BATTERY	750 CCA
TRANSMISSION	6-Speed Electronic Automatic
AXLE RATIO	3.07:1
STEERING	Electric Power Assist Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38.4 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	6.0 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, ABS
FUEL CAPACITY	19.0 Gallons/71.9 Liters
GENERAL MEASUREMENTS	
WHEELBASE	112.9 inches
LENGTH	202.9 inches
CURB WEIGHT	4,212 lbs.
HEIGHT	61.3 inches
INTERIOR VOLUME	
FRONT	54.8 cu. ft.
REAR	48.1 cu. ft.
COMB	103.0 cu. ft.
TRUNK	16.6 cu. ft. (with standard full size spare)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,290 lbs.
EPA MILEAGE EST. (MPG)	
CITY	19
HIGHWAY	28
COMBINED	22

MANUFACTURER VEHICLE HIGHLIGHTS

#1 PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY and 2015CY[1]

NEW FEATURES:

- VIN specific payload rating 1290lbs
- Improved seating material for improved durability, ingress and egress (Late running change in 2015MY) - Standard
- Rear Camera (viewable in 4" center stack) - Standard
- Rear Camera (viewable in Rear View Mirror) - No charge option
- Tail Lamp Prep Housing Kit - Available
- Redundant trunk lid release switch located in overhead console - Standard

SAFETY:

- Industry Exclusive 75mph Rear Crash
- Ultra High Strength Boron Steel Safety Cell Construction
- Level III NIJ ballistic panels - Certified for LAPD special threat rounds - Available
- Anti-Stab plates in seat backs - Standard

FUEL ECONOMY:

- Performance peaks at 240hp and 270 lb. ft of torque
- Active Grille Shutter system manages airflow to optimally balance engine cooling and Aerodynamics
- An EPA-estimated rating of 30 hwy mpg[2] comes courtesy of the 2.0L EcoBoost®, so you can achieve fuel-cost savings

1. The 2015CY is based upon Polk Registration data as of May 2015
2. EPA estimated ratings of 20 city / 30 hwy / 24 combined mpg. Actual mileage will vary

Ford PI Utility
3.7L AWD

MAKE & MODEL	2016 Ford Police Interceptor Utility AWD
SALES CODE	K8A, 99R
POWERTRAIN INFORMATION	
CUBIC INCHES	226
LITERS	3.7
HORSEPOWER SAENET	304 @ 6250 RPM
ALTERNATOR	220 AMP
TORQUE	279 @ 4000 RPM
BATTERY	750 CCA
TRANSMISSION	6-Speed Electronic Automatic
AXLE RATIO	3.65:1 with All-Wheel Drive
STEERING	Electric Power Assist Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38.8 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	6.5 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, ABS
FUEL CAPACITY	18.6 Gallons/70.4 Liters
GENERAL MEASUREMENTS	
WHEELBASE	112.6 inches
LENGTH	197.1 inches
CURB WEIGHT	4,672 lbs.
HEIGHT	69.2 inches without roof rack
INTERIOR VOLUME	
FRONT	59.7 cu. ft.
REAR	58.7 cu. ft.
COMB	118.4 cu. ft.
MAX CARGO AREA	85.1 cu. ft. (max cargo behind front seats)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,630 lbs.
EPA MILEAGE EST. (MPG)	
CITY	15
HIGHWAY	20
COMBINED	17

MANUFACTURER VEHICLE HIGHLIGHTS

#1 PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY and 2015CY[1]

NEW FEATURES & CHANGES:

- VIN specific payload rating 1630 lbs.
- New Front Fascia, Rear Tail Lamps, Grille, Rear Fascia and Spoiler
- New Headlamps (LED Low Beam, Incandescent high beam (with high beam wig-wag capability)
- New Tail Lamp Prep-Housing Kit - Available
- New Front Warning Aux Lights - Available
- New Forward Indicator Pocket Warning Light (Warn, Park, Turn) - Available
- Improved seating material for improved durability, ingress and egress (Late running change in 2015MY) - Standard
- Overhead console lift gate release switch (45 second timeout feature) - Standard
- Rear Camera with Washer (viewable in 4" center stack) - Standard
- Rear Camera with Washer (viewable in Rear View Mirror) - No charge option
- Power Windows – One touch up/down driver and passenger – Standard
- Power passenger seat (6-way) w/manual recline and lumbar – Available

SAFETY:

- Tested for three years in a row by MSP and LASD with Traction Control and Stability Control safety systems full on, as driven by officers in the real world
- Industry Exclusive 75mph Rear Crash
- Ultra High Strength Boron Steel Safety Cell Construction
- Level III NIJ ballistic panels - Certified for LAPD special threat rounds - Available
- Anti-Stab plates in seat backs – Standard

DURABILITY:

- Two times durability testing

PERFORMANCE:

- Standard Full-Time AWD

1. The 2015CY is based upon Polk Registration data as of May 2015

Ford PI Utility
3.5L Ecoboost AWD

MAKE & MODEL	2016 Ford Police Interceptor Ecoboost Utility AWD
SALES CODE	K8A, 99T
POWERTRAIN INFORMATION	
CUBIC INCHES	214
LITERS	3.5
HORSEPOWER SAENET	365 @ 5500 RPM
ALTERNATOR	220 AMP
TORQUE	350 @ 1500-5250 RPM
BATTERY	750 CCA
TRANSMISSION	6-Speed Electronic Automatic
AXLE RATIO	3.16:1 with All-Wheel Drive
STEERING	Electric Power Assist Rack-and-Pinion
TURNING CIRCLE (CURB TO CURB)	38.8 ft.
TIRE SIZE, LOAD & SPEED RATING	Goodyear Eagle RSA P245/55/R18, Load Rating 103, V Speed Rating
GROUND CLEARANCE, MINIMUM	6.4 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, ABS
FUEL CAPACITY	18.6 Gallons/70.4 Liters
GENERAL MEASUREMENTS	
WHEELBASE	112.6 inches
LENGTH	197.1 inches
CURB WEIGHT	4,775 lbs.
HEIGHT	69.2 inches without roof rack
INTERIOR VOLUME	
FRONT	59.7 cu. ft.
REAR	58.7 cu. ft.
COMB	118.4 cu. ft.
MAX CARGO AREA	85.1 cu. ft. (max cargo behind front seats)
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,580 lbs.
EPA MILEAGE EST. (MPG)	
CITY	15
HIGHWAY	20
COMBINED	17

MANUFACTURER VEHICLE HIGHLIGHTS

#1 PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY and 2015CY[1]

NEW FEATURES & CHANGES:

- VIN specific payload rating 1580 lbs
- New Front Fascia, Rear Tail Lamps, Grille, Rear Fascia and Spoiler
- New Headlamps (LED Low Beam, Incandescent high beam (with high beam wig-wag capability)
- New Tail Lamp Pre-Housing Kit - Available
- New Front Warning Aux Lights - Available
- New Forward Indicator Pocket Warning Light (Warn, Park, Turn) - Available
- Improved seating material for improved durability, ingress and egress (Late running change in 2015MY) - Standard
- Overhead console liftgate release switch (45 second timeout feature) - Standard
- Rear Camera with Washer (viewable in 4" center stack) - Standard
- Rear Camera with Washer (viewable in 4" Rear View Mirror) - No charge option
- Power Widows – One Touch up/down driver and passenger – Standard
- Power passenger seat (6-way) w/manual recline and lumbar – Available

SAFETY:

- Tested by MSP and LASD with Traction Control and Stability Control safety systems full on, as driven by officers in the real world
- Industry Exclusive 75mph Rear Crash
- Ultra High Strength Boron Steel Safety Cell Construction
- Level III NIJ ballistic panels - Certified for LAPD special threat rounds - Available
- Anti-Stab plates in seat backs – Standard

DURABILITY:

- Two times durability testing / Proven real world durability results

PERFORMANCE:

- Standard Full-Time AWD

1. The 2015CY is based upon Polk Registration data as of May 2015
2. The 2015CY is based upon Polk Registration data as of May 2015

VEHICLE DYNAMICS TESTING

TESTING OBJECTIVE

To determine each vehicle's high-speed pursuit or emergency response handling characteristics and performance in comparison to the other vehicles in the test group. The course used is a 2-mile road-racing type configuration, containing hills, curves, and corners. The course simulates actual conditions encountered in pursuit or emergency driving situations in the field, with the exception of other traffic. The evaluation is a true test of the success or failure of the vehicle manufacturers to offer vehicles that provide the optimum balance between handling (suspension components), acceleration (usable horsepower), and braking characteristics.

TESTING METHODOLOGY

Each vehicle is driven a total of 32 timed laps, using four separate drivers, each driving an eight lap series. The final score for the vehicle is the combined average (from the four drivers) of the five fastest laps for each driver during the eight lap series.

Grattan Raceway, 7201 Lessiter Road, Belding, MI 48809

(616) 691-7221

GRATTAN RACEWAY 2016 MODEL YEAR VEHICLE DYNAMICS SCHEDULE SEPTEMBER 21, 2015				
	SCHUTTER	**MERCER**	**MCCARTHY**	**SCHWALM**
9:00 a.m.	**PRACTICE**			
9:30 a.m.	Ford P.I. Sedan 3.7L AWD	Dodge Charger 3.6L 3.08 RWD	Chevrolet Caprice 3.6L RWD	Dodge Charger 3.6L 2.62 RWD
9:50 a.m.	Ford P.I. Utility Ecoboost 3.5L AWD	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD	Ford P.I. Utility 3.7L AWD
10:10 a.m.	Dodge Charger 5.7L 3.08 AWD	Dodge Charger 5.7L 2.62 RWD	Ford P.I. Sedan Ecoboost 3.5L AWD	Chevrolet Caprice 6.0L RWD
10:30 a.m.	Chevrolet Impala 3.6L FWD	Ford P.I. Sedan 3.5L FWD	Ford P.I. Sedan 2.0L FWD	
10:50 a.m.	Dodge Charger 3.6L 2.62 RWD	Ford P.I. Sedan AWD 3.7L	Dodge Charger 3.6L 3.08 RWD	Chevrolet Caprice 3.6L RWD
11:10 a.m.	Ford P.I. Utility 3.7L AWD	Ford P.I. Utility Ecoboost 3.5L AWD	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD
11:30 a.m.	Chevrolet Caprice 6.0L RWD	Dodge Charger 5.7L 3.08 AWD	Dodge Charger 5.7L 2.62 RWD	Ford P.I. Sedan Ecoboost 3.5L AWD
11:50 a.m.		Chevrolet Impala 3.6L FWD	Ford P.I. Sedan 3.5L FWD	Ford P.I. Sedan 2.0L FWD
LUNCH BREAK				
12:50 p.m.	Chevrolet Caprice 3.6L RWD	Dodge Charger 3.6L 2.62 RWD	Ford P.I. Sedan 3.7L AWD	Dodge Charger 3.6L 3.08 RWD
1:10 p.m.	Chevrolet Tahoe 5.3L 4WD	Ford P.I. Utility 3.7L AWD	Ford P.I. Utility Ecoboost 3.5L AWD	Chevrolet Tahoe 5.3L RWD
1:30 p.m.	Ford P.I. Sedan Ecoboost 3.5L AWD	Chevrolet Caprice 6.0L RWD	Dodge Charger 5.7L 3.08 AWD	Dodge Charger 5.7L 2.62 RWD
1:50 p.m.	Ford P.I. Sedan 2.0L FWD		Chevrolet Impala 3.6L FWD	Ford P.I. Sedan 3.5L FWD
2:10 p.m.	Dodge Charger 3.6L 3.08 RWD	Chevrolet Caprice 3.6L RWD	Dodge Charger 3.6L 2.62 RWD	Ford P.I. Sedan 3.7L AWD
2:30 p.m.	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD	Ford P.I. Utility 3.7L AWD	Ford P.I. Utility Ecoboost 3.5L AWD
2:50 p.m.	Dodge Charger 5.7L 2.62 RWD	Ford P.I. Sedan Ecoboost 3.5L AWD	Chevrolet Caprice 6.0L RWD	Dodge Charger 5.7L 3.08 AWD
3:10 p.m.	Ford P.I. Sedan 3.5L FWD	Ford P.I. Sedan 2.0L FWD		Chevrolet Impala 3.6L FWD

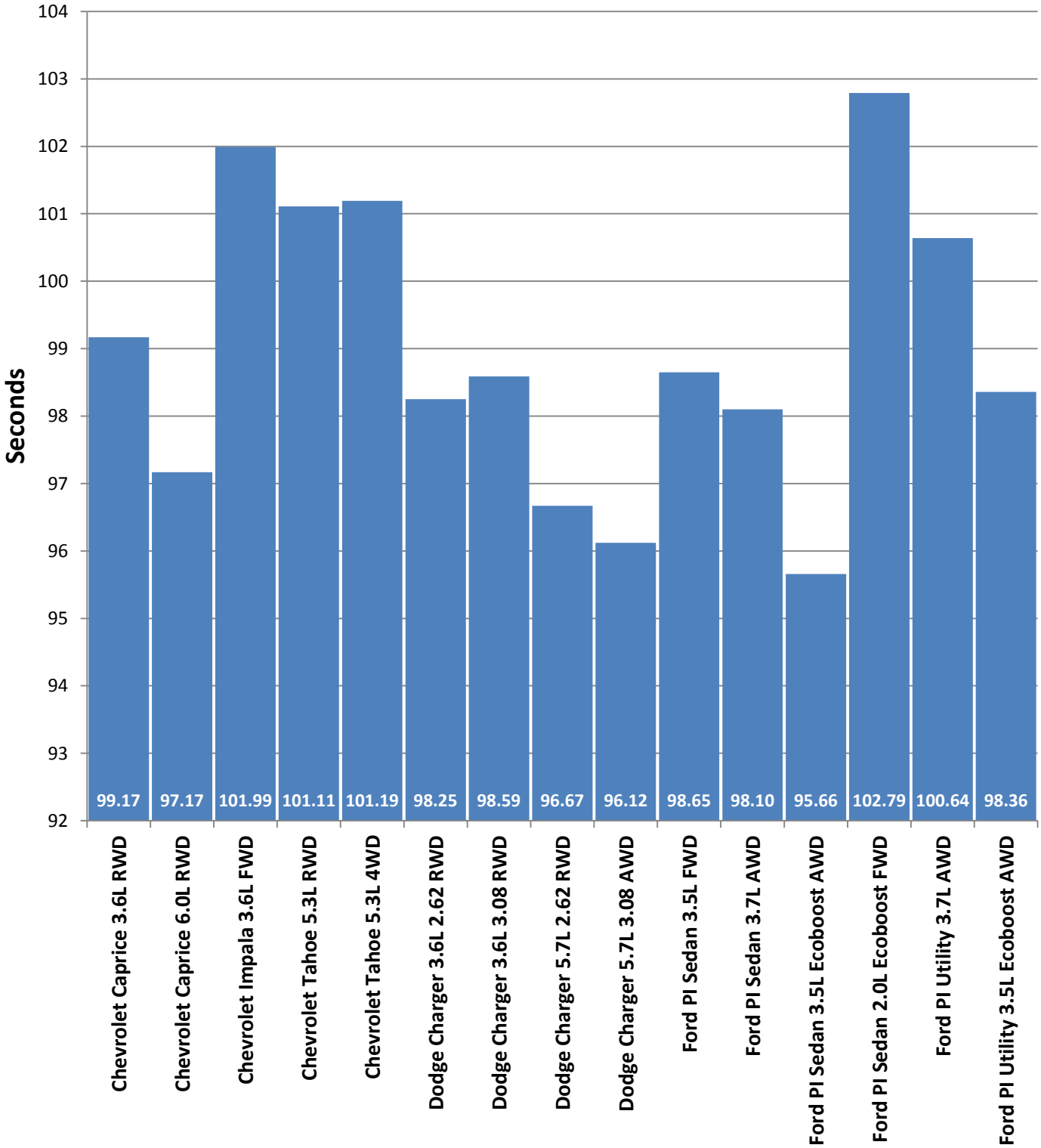
VEHICLE DYNAMICS TESTING ON SEPTEMBER 21, 2015

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
Chevrolet Caprice 3.6L RWD	MCCARTHY	01:38.57	01:38.69	01:38.72	01:38.80	01:38.89	01:38.73
	MERCER	01:38.31	01:38.38	01:38.54	01:38.56	01:38.56	01:38.47
	SCHUTTER	01:39.18	01:39.43	01:39.48	01:39.51	01:39.71	01:39.46
	SCHWALM	01:39.74	01:39.75	01:40.06	01:40.20	01:40.23	01:40.00
Overall Average							**01:39.17**
Chevrolet Caprice 6.0L RWD	MCCARTHY	01:36.44	01:36.78	01:37.12	01:37.21	01:37.23	01:36.96
	MERCER	01:36.32	01:36.58	01:36.59	01:36.62	01:36.76	01:36.57
	SCHUTTER	01:37.34	01:37.51	01:37.64	01:37.73	01:37.91	01:37.63
	SCHWALM	01:37.39	01:37.46	01:37.51	01:37.55	01:37.62	01:37.51
Overall Average							**01:37.17**
Chevrolet Impala 3.6L FWD	MCCARTHY	01:41.01	01:41.06	01:41.34	01:41.51	01:41.59	01:41.30
	MERCER	01:41.48	01:41.76	01:41.89	01:41.93	01:41.95	01:41.80
	SCHUTTER	01:41.12	01:41.53	01:42.23	01:42.27	01:42.31	01:41.89
	SCHWALM	01:42.74	01:42.82	01:42.85	01:42.95	01:43.37	01:42.95
Overall Average							**01:41.99**
Chevrolet Tahoe 5.3L RWD	MCCARTHY	01:40.41	01:40.63	01:40.73	01:40.85	01:40.90	01:40.70
	MERCER	01:40.30	01:40.39	01:40.45	01:40.49	01:40.61	01:40.45
	SCHUTTER	01:41.13	01:41.23	01:41.33	01:41.43	01:41.43	01:41.31
	SCHWALM	01:41.49	01:42.02	01:42.02	01:42.09	01:42.23	01:41.97
Overall Average							**01:41.11**
Chevrolet Tahoe 5.3L 4WD	MCCARTHY	01:40.30	01:40.54	01:40.71	01:40.77	01:40.89	01:40.64
	MERCER	01:41.04	01:41.27	01:41.39	01:41.55	01:41.59	01:41.37
	SCHUTTER	01:40.88	01:41.36	01:41.40	01:41.45	01:41.51	01:41.32
	SCHWALM	01:41.08	01:41.35	01:41.43	01:41.43	01:41.81	01:41.42
Overall Average							**01:41.19**
Dodge Charger 3.6L 2.62 RWD	MCCARTHY	01:37.62	01:37.83	01:37.88	01:37.93	01:38.00	01:37.85
	MERCER	01:37.37	01:37.51	01:38.08	01:38.12	01:38.16	01:37.85
	SCHUTTER	01:38.08	01:38.08	01:38.29	01:38.30	01:38.30	01:38.21
	SCHWALM	01:38.44	01:39.01	01:39.11	01:39.44	01:39.51	01:39.10
Overall Average							**01:38.25**
Dodge Charger 3.6L 3.08 RWD	MCCARTHY	01:38.17	01:38.72	01:38.78	01:38.87	01:38.93	01:38.69
	MERCER	01:38.19	01:38.39	01:38.46	01:38.54	01:38.81	01:38.48
	SCHUTTER	01:38.07	01:38.32	01:38.32	01:38.45	01:38.60	01:38.35
	SCHWALM	01:38.65	01:38.68	01:38.80	01:38.99	01:39.03	01:38.83
Overall Average							**01:38.59**
Dodge Charger 5.7L 2.62 RWD	MCCARTHY	01:35.74	01:36.46	01:36.49	01:36.54	01:36.80	01:36.41
	MERCER	01:36.06	01:36.19	01:36.20	01:36.49	01:36.62	01:36.31
	SCHUTTER	01:36.42	01:36.54	01:36.54	01:36.60	01:36.69	01:36.56
	SCHWALM	01:37.22	01:37.24	01:37.33	01:37.61	01:37.62	01:37.40
Overall Average							**01:36.67**
Dodge Charger 5.7L 3.08 AWD	MCCARTHY	01:35.59	01:35.68	01:35.95	01:36.07	01:36.07	01:35.87
	MERCER	01:35.14	01:35.21	01:35.25	01:35.62	01:35.78	01:35.40
	SCHUTTER	01:36.02	01:36.24	01:36.36	01:36.47	01:36.54	01:36.33
	SCHWALM	01:36.71	01:36.74	01:36.96	01:37.00	01:37.01	01:36.88
Overall Average							**01:36.12**

VEHICLE DYNAMICS TESTING ON SEPTEMBER 21, 2015

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
Ford PI Sedan 3.5L FWD	MCCARTHY	01:38.11	01:38.18	01:38.24	01:38.33	01:38.33	01:38.24
	MERCER	01:38.37	01:38.56	01:38.60	01:38.66	01:38.67	01:38.57
	SCHUTTER	01:37.88	01:38.23	01:38.26	01:38.40	01:38.57	01:38.27
	SCHWALM	01:39.36	01:39.39	01:39.56	01:39.61	01:39.61	01:39.51
Overall Average							**01:38.65**
Ford PI Sedan 3.7L AWD	MCCARTHY	01:37.90	01:37.92	01:38.05	01:38.11	01:38.23	01:38.04
	MERCER	01:37.24	01:37.30	01:37.41	01:37.52	01:37.63	01:37.42
	SCHUTTER	01:38.23	01:38.54	01:38.56	01:38.61	01:38.65	01:38.52
	SCHWALM	01:38.05	01:38.35	01:38.47	01:38.53	01:38.64	01:38.41
Overall Average							**01:38.10**
Ford PI Sedan 3.5L Ecoboost AWD	MCCARTHY	01:34.92	01:34.98	01:35.12	01:35.17	01:35.22	01:35.08
	MERCER	01:34.94	01:35.33	01:35.44	01:35.50	01:35.87	01:35.42
	SCHUTTER	01:35.10	01:35.33	01:35.48	01:35.57	01:35.63	01:35.42
	SCHWALM	01:36.27	01:36.48	01:36.83	01:36.94	01:37.02	01:36.71
Overall Average							**01:35.66**
Ford PI Sedan 2.0L Ecoboost FWD	MCCARTHY	01:40.81	01:41.50	01:43.06	01:44.30	01:44.56	01:42.85
	MERCER	01:40.57	01:40.87	01:41.94	01:42.29	01:42.76	01:41.69
	SCHUTTER	01:41.23	01:41.86	01:43.43	01:44.46	01:44.53	01:43.10
	SCHWALM	01:42.77	01:42.86	01:43.98	01:43.99	01:44.05	01:43.53
Overall Average							**01:42.79**
Ford PI Utility 3.7L AWD	MCCARTHY	01:39.69	01:39.82	01:39.99	01:40.01	01:40.24	01:39.95
	MERCER	01:40.09	01:40.12	01:40.13	01:40.19	01:40.29	01:40.16
	SCHUTTER	01:40.49	01:41.12	01:41.13	01:41.22	01:41.22	01:41.04
	SCHWALM	01:40.86	01:41.40	01:41.53	01:41.63	01:41.67	01:41.42
Overall Average							**01:40.64**
Ford PI Utility 3.5L Ecoboost AWD	MCCARTHY	01:38.09	01:38.12	01:38.30	01:38.32	01:38.34	01:38.23
	MERCER	01:37.50	01:37.73	01:37.92	01:38.10	01:38.11	01:37.87
	SCHUTTER	01:37.93	01:38.11	01:38.27	01:38.36	01:38.44	01:38.22
	SCHWALM	01:39.02	01:39.02	01:39.15	01:39.19	01:39.25	01:39.13
Overall Average							**01:38.36**

2016 Model Year
Vehicle Dynamics



2016
Model Year
Vehicle Dynamics

ACCELERATION AND TOP SPEED TESTING

ACCELERATION TESTING OBJECTIVE

To determine the ability of each test vehicle to accelerate from a standing start to 60 mph, 80 mph, and 100 mph, and determine the distance to reach 100 mph and 120 mph.

ACCELERATION TESTING METHODOLOGY

Using a DLS Smart Sensor – Optical non-contact Speed and Distance Sensor in conjunction with a laptop computer, each vehicle is driven through four acceleration sequences, two northbound and two southbound, to allow for wind direction. The four resulting times for each target speed are averaged and the average times are used to derive scores for acceleration.

TOP SPEED TESTING OBJECTIVE

To determine the actual top speed attainable by each test vehicle within a distance of 14 miles from a standing start.

TOP SPEED TESTING METHODOLOGY

Following the fourth acceleration run, each test vehicle continues to accelerate to the top speed attainable within 14 miles from the start of the run. The highest speed attained within the 14 mile distance is considered the vehicle's top speed.

CHRYSLER CORPORATION CHELSEA PROVING GROUNDS

TEST LOCATION: FCA Proving Grounds **DATE:** September 19, 2015

Chevrolet Caprice 3.6L RWD

BEGINNING TIME: 4:25 p.m. **TEMPERATURE:** 65.2° F
WIND VELOCITY: 14.3 mph **WIND DIRECTION:** 299°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.22	8.30	8.21	8.35	**8.27 seconds**
0 – 80	13.13	13.28	13.05	13.39	**13.21 seconds**
0 – 100	19.99	20.51	19.98	20.66	**20.29 seconds**

DISTANCE TO REACH 100 MPH: 0.35 mile
DISTANCE TO REACH 120 MPH: 0.76 mile

TOP SPEED ATTAINED: 146 mph

DISTANCE TO REACH TOP SPEED: 7.91 miles
TIME TO REACH TOP SPEED: 216.34 seconds

Chevrolet Caprice 6.0L RWD

BEGINNING TIME: 2:25 p.m. **TEMPERATURE:** 65.2° F
WIND VELOCITY: 9 mph **WIND DIRECTION:** 322°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.18	6.31	6.24	6.31	**6.26 seconds**
0 – 80	10.06	10.17	9.99	10.06	**10.07 seconds**
0 – 100	14.67	15.09	14.66	14.92	**14.84 seconds**

DISTANCE TO REACH 100 MPH: 0.25 mile
DISTANCE TO REACH 120 MPH: 0.48 mile

TOP SPEED ATTAINED: 155 mph

DISTANCE TO REACH TOP SPEED: 6.62 miles
TIME TO REACH TOP SPEED: 169.77 seconds

Chevrolet Impala 3.6L FWD

BEGINNING TIME: 6:15 p.m. **TEMPERATURE:** 64.1° F
WIND VELOCITY: 14.5 mph **WIND DIRECTION:** 301°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.79	7.85	7.78	7.83	**7.81 seconds**
0 – 80	12.44	12.51	12.42	12.80	**12.54 seconds**
0 – 100	18.97	19.60	19.23	20.01	**19.45 seconds**

DISTANCE TO REACH 100 MPH: 0.34 mile
DISTANCE TO REACH 120 MPH: 0.70 mile

TOP SPEED ATTAINED: 150 mph

DISTANCE TO REACH TOP SPEED: 3.68 miles
TIME TO REACH TOP SPEED: 107.75 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 19, 2015

Chevrolet Tahoe 5.3L RWD

BEGINNING TIME: 3:40 p.m. **TEMPERATURE:** 68.4° F
WIND VELOCITY: 13.1 mph **WIND DIRECTION:** 311°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.82	7.95	7.89	8.11	**7.94 seconds**
0 – 80	12.92	13.14	12.78	13.30	**13.04 seconds**
0 – 100	19.25	20.18	19.20	20.47	**19.78 seconds**

DISTANCE TO REACH 100 MPH: 0.34 mile
DISTANCE TO REACH 120 MPH: 0.74 mile

TOP SPEED ATTAINED: 137 mph

DISTANCE TO REACH TOP SPEED: 4.07 miles
TIME TO REACH TOP SPEED: 125.50 seconds

Chevrolet Tahoe 5.3L 4WD

BEGINNING TIME: 2:47 p.m. **TEMPERATURE:** 67.7° F
WIND VELOCITY: 15.7 mph **WIND DIRECTION:** 284°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.39	8.20	8.14	8.18	**8.23 seconds**
0 – 80	13.87	13.78	13.39	13.77	**13.70 seconds**
0 – 100	20.53	21.18	20.21	20.87	**20.70 seconds**

DISTANCE TO REACH 100 MPH: 0.36 mile
DISTANCE TO REACH 120 MPH: 0.81 mile

TOP SPEED ATTAINED: 121 mph

DISTANCE TO REACH TOP SPEED: 1.26 miles
TIME TO REACH TOP SPEED: 48.76 seconds

Dodge Charger 3.6L 2.62 RWD

BEGINNING TIME: 4:51 p.m. **TEMPERATURE:** 64.7° F
WIND VELOCITY: 7 mph **WIND DIRECTION:** 313°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.11	8.06	7.97	8.02	**8.04 seconds**
0 – 80	12.88	13.12	12.75	12.84	**12.90 seconds**
0 – 100	20.45	21.00	20.40	20.73	**20.65 seconds**

DISTANCE TO REACH 100 MPH: 0.37 mile
DISTANCE TO REACH 120 MPH: 0.70 mile

TOP SPEED ATTAINED: 141 mph

DISTANCE TO REACH TOP SPEED: 6.78 miles
TIME TO REACH TOP SPEED: 191.37 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 19, 2015

Dodge Charger 3.6L 3.08 RWD

BEGINNING TIME: 5:38 p.m. **TEMPERATURE:** 65.6° F
WIND VELOCITY: 10.2 mph **WIND DIRECTION:** 310°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.36	8.39	8.06	8.23	**8.26 seconds**
0 – 80	13.19	13.43	12.89	13.26	**13.19 seconds**
0 – 100	20.77	21.75	20.37	21.52	**21.10 seconds**

DISTANCE TO REACH 100 MPH: 0.38 mile
DISTANCE TO REACH 120 MPH: 0.77 mile

TOP SPEED ATTAINED: 142 mph

DISTANCE TO REACH TOP SPEED: 11.78 miles
TIME TO REACH TOP SPEED: 319.07 seconds

Dodge Charger 5.7L 2.62 RWD

BEGINNING TIME: 1:10 p.m. **TEMPERATURE:** 64.1° F
WIND VELOCITY: 8.5 mph **WIND DIRECTION:** 303°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.44	6.28	6.27	6.92	**6.48 seconds**
0 – 80	9.83	9.79	9.72	10.67	**10.00 seconds**
0 – 100	15.15	15.36	15.03	16.64	**15.55 seconds**

DISTANCE TO REACH 100 MPH: 0.27 mile
DISTANCE TO REACH 120 MPH: 0.48 mile

TOP SPEED ATTAINED: 150 mph

DISTANCE TO REACH TOP SPEED: 13.28 miles
TIME TO REACH TOP SPEED: 334.95 seconds

Dodge Charger 5.7L 3.08 AWD

BEGINNING TIME: 12:10 p.m. **TEMPERATURE:** 63.8° F
WIND VELOCITY: 17 mph **WIND DIRECTION:** 281°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.36	6.28	6.23	6.22	**6.27 seconds**
0 – 80	10.51	10.42	10.27	10.29	**10.37 seconds**
0 – 100	15.61	15.59	15.26	15.47	**15.48 seconds**

DISTANCE TO REACH 100 MPH: 0.27 mile
DISTANCE TO REACH 120 MPH: 0.53 mile

TOP SPEED ATTAINED: 150 mph

DISTANCE TO REACH TOP SPEED: 1.86 miles
TIME TO REACH TOP SPEED: 57.92 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 19, 2015

Ford PI Sedan 3.5L FWD

BEGINNING TIME: 5:56 p.m. **TEMPERATURE:** 64.8° F
WIND VELOCITY: 5.8 mph **WIND DIRECTION:** 287°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.91	7.79	7.80	7.83	**7.83 seconds**
0 – 80	12.82	12.89	12.60	12.88	**12.80 seconds**
0 – 100	19.63	19.97	19.44	20.11	**19.79 seconds**

DISTANCE TO REACH 100 MPH: 0.35 mile
DISTANCE TO REACH 120 MPH: 0.77 mile

TOP SPEED ATTAINED: 132 mph

DISTANCE TO REACH TOP SPEED: 1.95 miles
TIME TO REACH TOP SPEED: 67.07 seconds

Ford PI Sedan 3.7L AWD

BEGINNING TIME: 5:18 p.m. **TEMPERATURE:** 65.9° F
WIND VELOCITY: 14.2 mph **WIND DIRECTION:** 323°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.57	7.56	7.58	7.63	**7.59 seconds**
0 – 80	12.23	12.28	12.08	12.40	**12.25 seconds**
0 – 100	18.94	19.29	18.82	19.58	**19.16 seconds**

DISTANCE TO REACH 100 MPH: 0.34 mile
DISTANCE TO REACH 120 MPH: 0.77 mile

TOP SPEED ATTAINED: 132 mph

DISTANCE TO REACH TOP SPEED: 1.62 miles
TIME TO REACH TOP SPEED: 57.25 seconds

Ford PI Sedan 3.5L Ecoboost AWD

BEGINNING TIME: 12:31 p.m. **TEMPERATURE:** 64.9° F
WIND VELOCITY: 17.2 mph **WIND DIRECTION:** 292°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.75	5.98	5.96	5.98	**6.17 seconds**
0 – 80	10.28	9.47	9.34	9.46	**9.64 seconds**
0 – 100	15.23	14.49	14.08	14.51	**14.58 seconds**

DISTANCE TO REACH 100 MPH: 0.25 mile
DISTANCE TO REACH 120 MPH: 0.50 mile

TOP SPEED ATTAINED: 150 mph

DISTANCE TO REACH TOP SPEED: 7.58 miles
TIME TO REACH TOP SPEED: 195.58 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 19, 2015

Ford PI Sedan 2.0L Ecoboost FWD

BEGINNING TIME: 6:31 p.m. **TEMPERATURE:** 63.3° F
WIND VELOCITY: 7.5 mph **WIND DIRECTION:** 297°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.50	8.63	8.56	8.63	**8.58 seconds**
0 – 80	13.57	14.04	13.80	13.89	**13.83 seconds**
0 – 100	21.16	22.40	21.60	22.28	**21.86 seconds**

DISTANCE TO REACH 100 MPH: 0.39 mile
DISTANCE TO REACH 120 MPH: 0.98 mile

TOP SPEED ATTAINED: 121 mph

DISTANCE TO REACH TOP SPEED: 1.66 miles
TIME TO REACH TOP SPEED: 61.37 seconds

Ford PI Utility 3.7L AWD

BEGINNING TIME: 4:05 p.m. **TEMPERATURE:** 68.8° F
WIND VELOCITY: 10.5 mph **WIND DIRECTION:** 272°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.34	8.36	8.33	8.34	**8.34 seconds**
0 – 80	13.45	13.61	13.22	13.45	**13.43 seconds**
0 – 100	21.59	22.06	21.00	21.94	**21.65 seconds**

DISTANCE TO REACH 100 MPH: 0.39 mile
DISTANCE TO REACH 120 MPH: 0.99 mile

TOP SPEED ATTAINED: 132 mph

DISTANCE TO REACH TOP SPEED: 2.14 miles
TIME TO REACH TOP SPEED: 74.28 seconds

Ford PI Utility 3.5L Ecoboost AWD

BEGINNING TIME: 3:18 p.m. **TEMPERATURE:** 67.5° F
WIND VELOCITY: 12.3 mph **WIND DIRECTION:** 291°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.55	6.82	6.47	6.68	**6.63 seconds**
0 – 80	10.56	10.78	10.48	10.88	**10.68 seconds**
0 – 100	16.19	17.02	16.19	17.26	**16.67 seconds**

DISTANCE TO REACH 100 MPH: 0.29 mile
DISTANCE TO REACH 120 MPH: 0.65 mile

TOP SPEED ATTAINED: 132 mph

DISTANCE TO REACH TOP SPEED: 1.33 miles
TIME TO REACH TOP SPEED: 47.56 seconds

SUMMARY OF ACCELERATION AND TOP SPEED

CHEVROLET VEHICLES

	Chevrolet Caprice 3.6L RWD	Chevrolet Caprice 6.0L RWD	Chevrolet Impala 3.6L FWD	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD
ACCELERATION					
0 – 20 mph (seconds)	2.12	1.72	2.10	2.17	2.21
0 – 30 mph (seconds)	3.31	2.59	3.32	3.22	3.30
0 – 40 mph (seconds)	4.50	3.67	4.54	4.57	4.69
0 – 50 mph (seconds)	6.39	4.91	6.05	6.18	6.39
0 – 60 mph (seconds)	8.27	6.26	7.81	7.94	8.23
0 – 70 mph (seconds)	10.28	8.09	9.74	10.32	10.74
0 – 80 mph (seconds)	13.21	10.07	12.54	13.04	13.70
0 – 90 mph (seconds)	16.67	12.26	15.83	16.10	16.99
0 – 100 mph (seconds)	20.29	14.84	19.45	19.78	20.70
TOP SPEED (mph)	146	155	150	137	121
DISTANCE TO REACH					
100 mph (miles)	0.35	0.25	0.34	0.34	0.36
120 mph (miles)	0.76	0.48	0.70	0.74	0.81
Top Speed (miles)	7.91	6.62	3.68	4.07	1.26
QUARTER MILE					
Time (seconds)	16.38	14.76	16.10	16.28	16.52
Speed (mph)	89.17	99.84	90.85	90.63	88.99

SUMMARY OF ACCELERATION AND TOP SPEED

DODGE VEHICLES

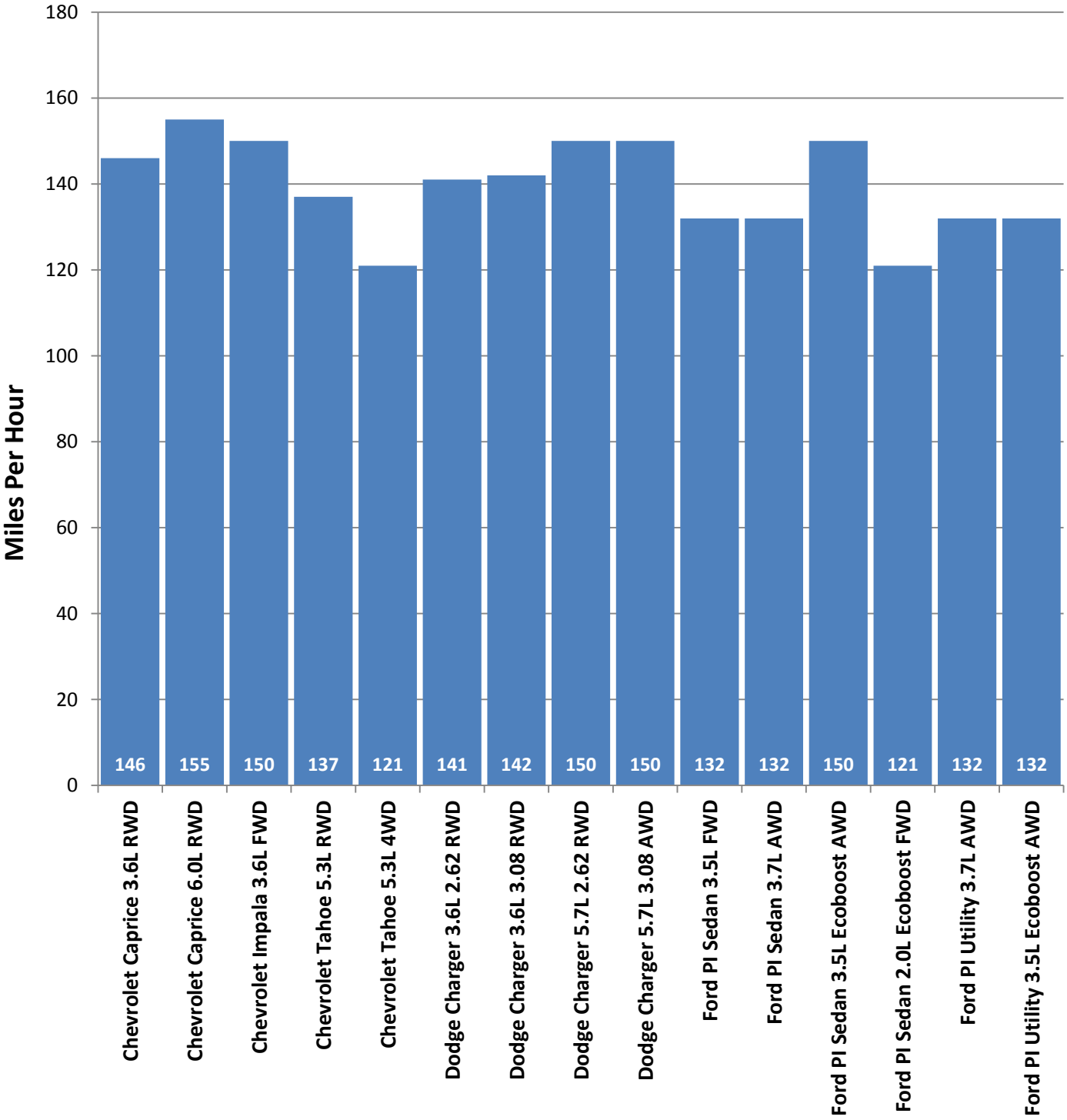
	Dodge Charger 3.6L 2.62 RWD	Dodge Charger 3.6L 3.08 RWD	Dodge Charger 5.7L 2.62 RWD	Dodge Charger 5.7L 3.08 AWD
ACCELERATION				
0 – 20 mph (seconds)	1.95	1.95	1.68	1.54
0 – 30 mph (seconds)	3.23	3.38	2.68	2.47
0 – 40 mph (seconds)	4.48	4.80	3.68	3.50
0 – 50 mph (seconds)	6.05	6.28	4.94	4.84
0 – 60 mph (seconds)	8.04	8.26	6.48	6.27
0 – 70 mph (seconds)	10.19	10.66	8.08	8.06
0 – 80 mph (seconds)	12.90	13.19	10.00	10.37
0 – 90 mph (seconds)	16.62	16.06	12.69	12.81
0 – 100 mph (seconds)	20.65	21.10	15.55	15.48
TOP SPEED (mph)	141	142	150	150
DISTANCE TO REACH				
100 mph (miles)	0.37	0.38	0.27	0.27
120 mph (miles)	0.70	0.77	0.48	0.53
Top Speed (miles)	6.78	11.78	13.28	1.86
QUARTER MILE				
Time (seconds)	16.20	16.37	14.86	14.81
Speed (mph)	88.80	90.68	97.50	97.83

SUMMARY OF ACCELERATION AND TOP SPEED

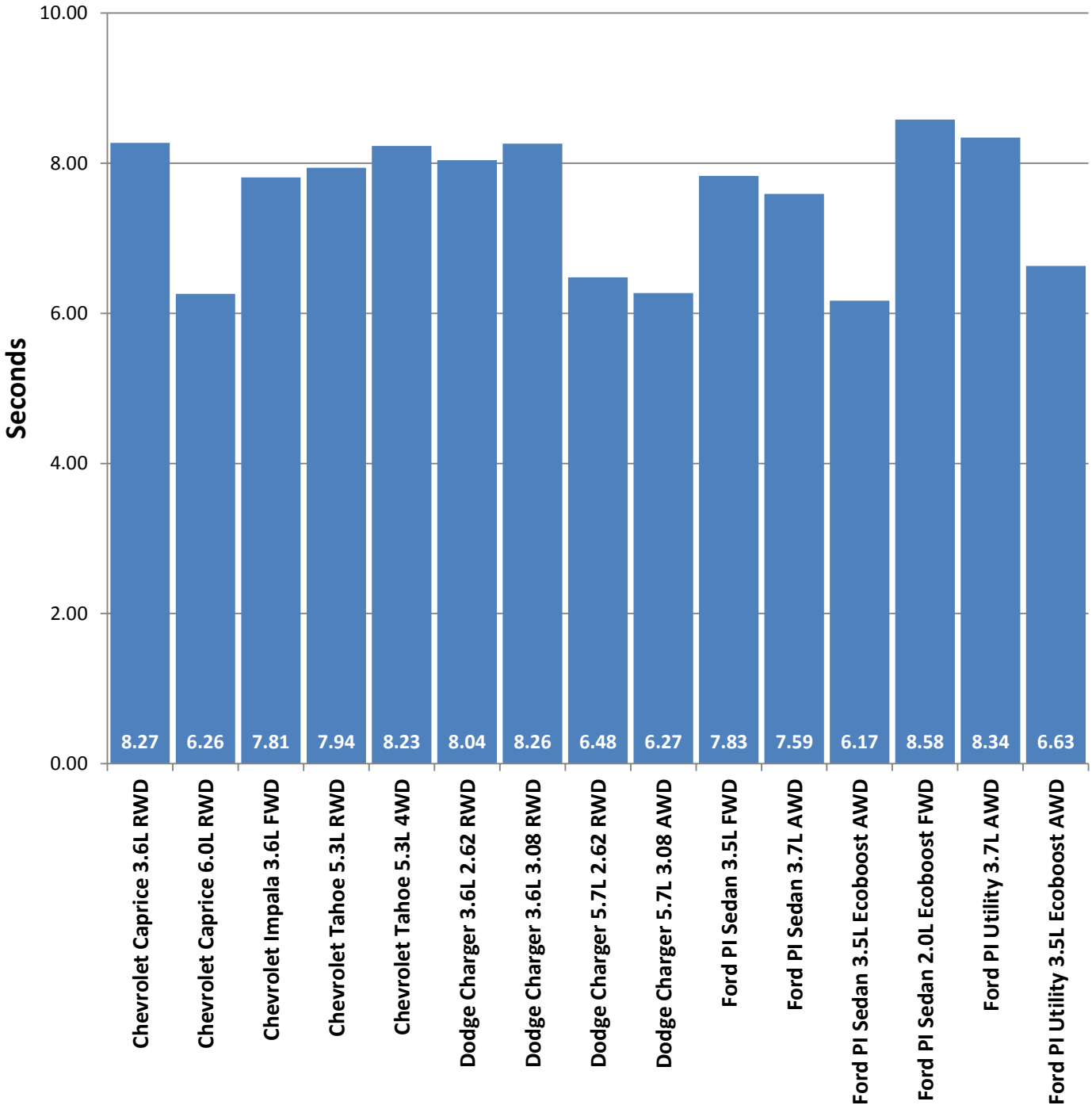
FORD VEHICLES

	Ford PI Sedan 3.5L FWD	Ford PI Sedan 3.7L AWD	Ford PI Sedan 3.5L Ecoboost AWD	Ford PI Sedan 2.0L Ecoboost FWD	Ford PI Utility 3.7L AWD	Ford PI Utility 3.5L Ecoboost AWD
ACCELERATION						
0 – 20 mph (seconds)	2.09	1.88	1.71	2.07	1.99	1.72
0 – 30 mph (seconds)	3.11	2.86	2.52	3.07	3.05	2.58
0 – 40 mph (seconds)	4.38	4.12	3.46	4.57	4.50	3.61
0 – 50 mph (seconds)	5.94	5.58	4.58	6.27	6.07	4.86
0 – 60 mph (seconds)	7.83	7.59	6.17	8.58	8.34	6.63
0 – 70 mph (seconds)	10.28	9.81	7.84	10.88	10.64	8.55
0 – 80 mph (seconds)	12.80	12.25	9.64	13.83	13.43	10.68
0 – 90 mph (seconds)	15.77	15.43	11.97	17.51	16.94	13.53
0 – 100 mph (seconds)	19.79	19.16	14.58	21.86	21.65	16.67
TOP SPEED (mph)	132	132	150	121	132	132
DISTANCE TO REACH						
100 mph (miles)	0.35	0.34	0.25	0.39	0.39	0.29
120 mph (miles)	0.77	0.77	0.50	0.98	0.99	0.65
Top Speed (miles)	1.95	1.62	7.58	1.66	2.14	1.33
QUARTER MILE						
Time (seconds)	16.12	15.83	14.60	16.54	16.38	15.08
Speed (mph)	91.10	91.03	100.08	87.42	88.13	95.38

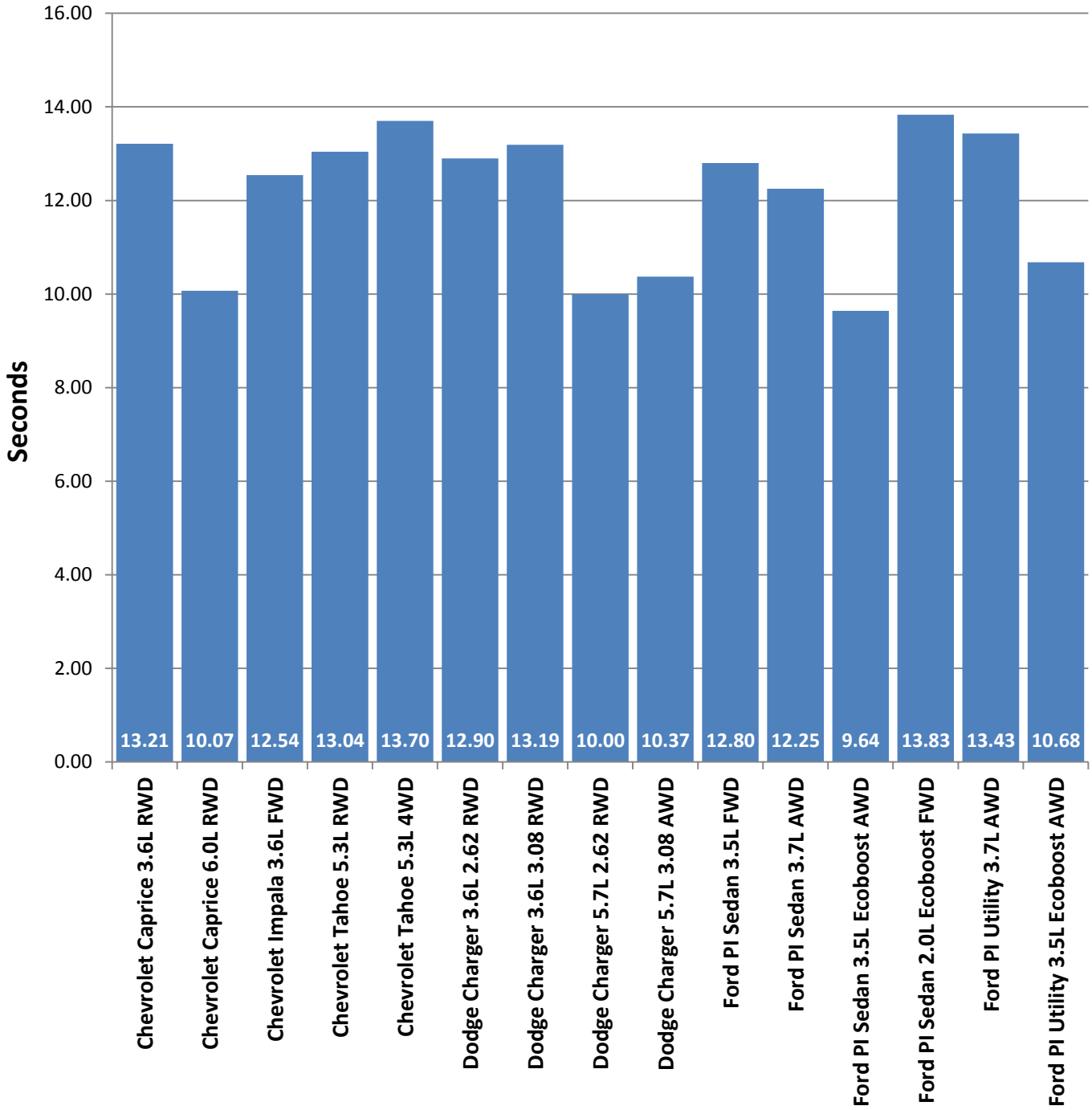
2016 Model Year
Top Speed Comparison
Top Speed Attained



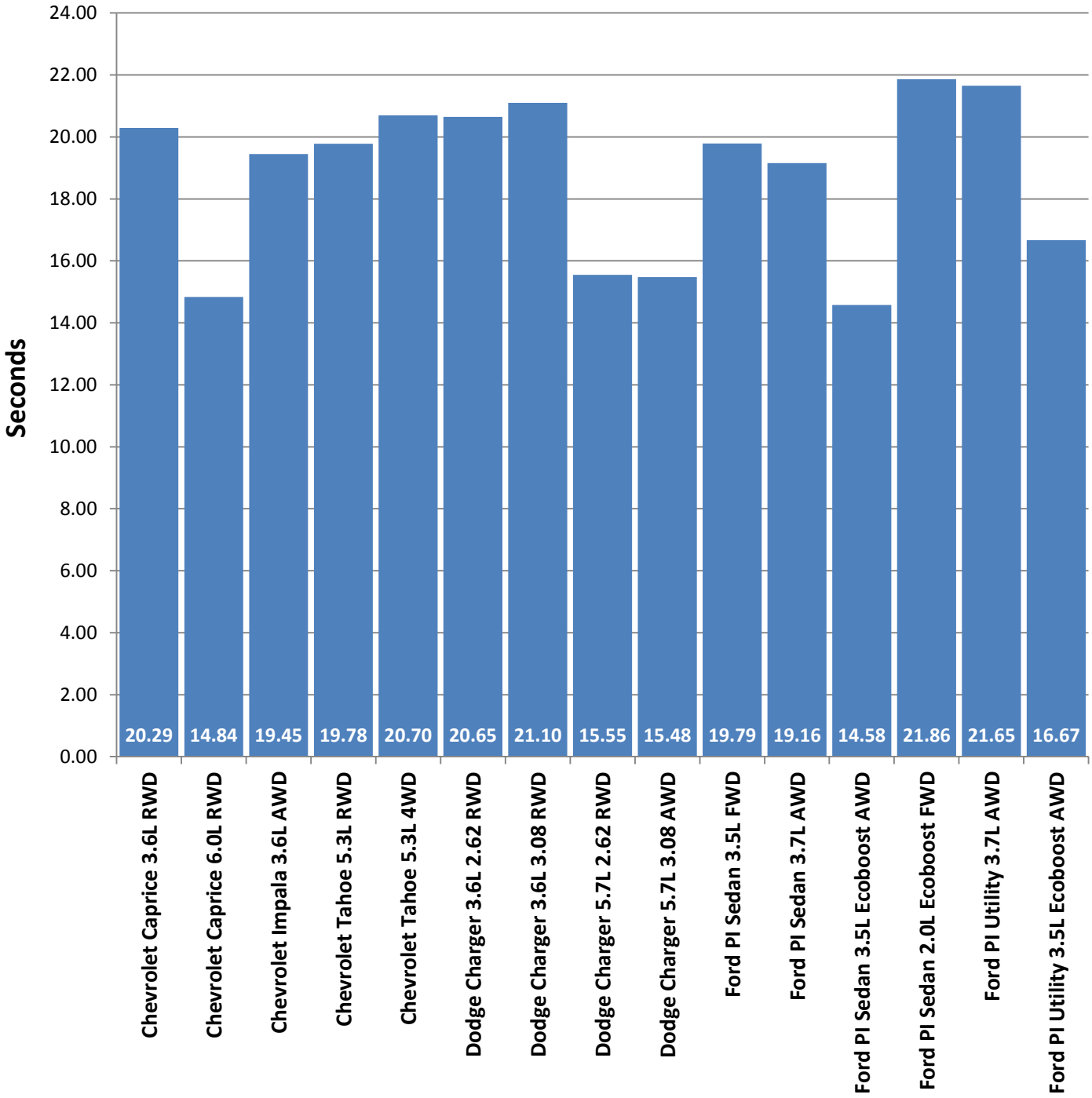
2016 Model Year
Acceleration Comparison
Acceleration Times
0-60 mph



2016 Model Year
Acceleration Comparison
Acceleration Times
0-80 mph



2016 Model Year
Acceleration Comparison
Acceleration Times
0-100 mph



BRAKE TESTING

BRAKE TESTING OBJECTIVE

To determine the deceleration rate attained by each test vehicle on twenty 60 – 0 mph full ABS stops. Each vehicle is scored on the average deceleration rate it achieves.

BRAKE TESTING METHODOLOGY

Each vehicle is taken to the 1.6 mile east/west straightaway and started from the beginning of the straightaway with "cold" brakes. The vehicle then begins its sequence of stops heading in a westerly direction. Within the 1.6 miles, the vehicle is stopped 5 times at pre-determined points on the roadway (.3 miles apart). The vehicle is then turned around and stops an additional 5 times again at pre-determined points on the roadway in an easterly direction. After the 10 stops, the vehicle drives the length of the straightaway (down and back) at 45 mph. This is done in an effort to cool the brakes before the second sequence. After the down and back lap, the 10 stops are repeated.

The data resulting from the twenty stops is used to calculate the average deceleration rate which is the vehicle's score for the test.

DECELERATION RATE FORMULA

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

EXAMPLE:

Initial Velocity = 89.175 ft/s (60.8 mph x 1.4667*)
Stopping Distance = 171.4 ft.

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

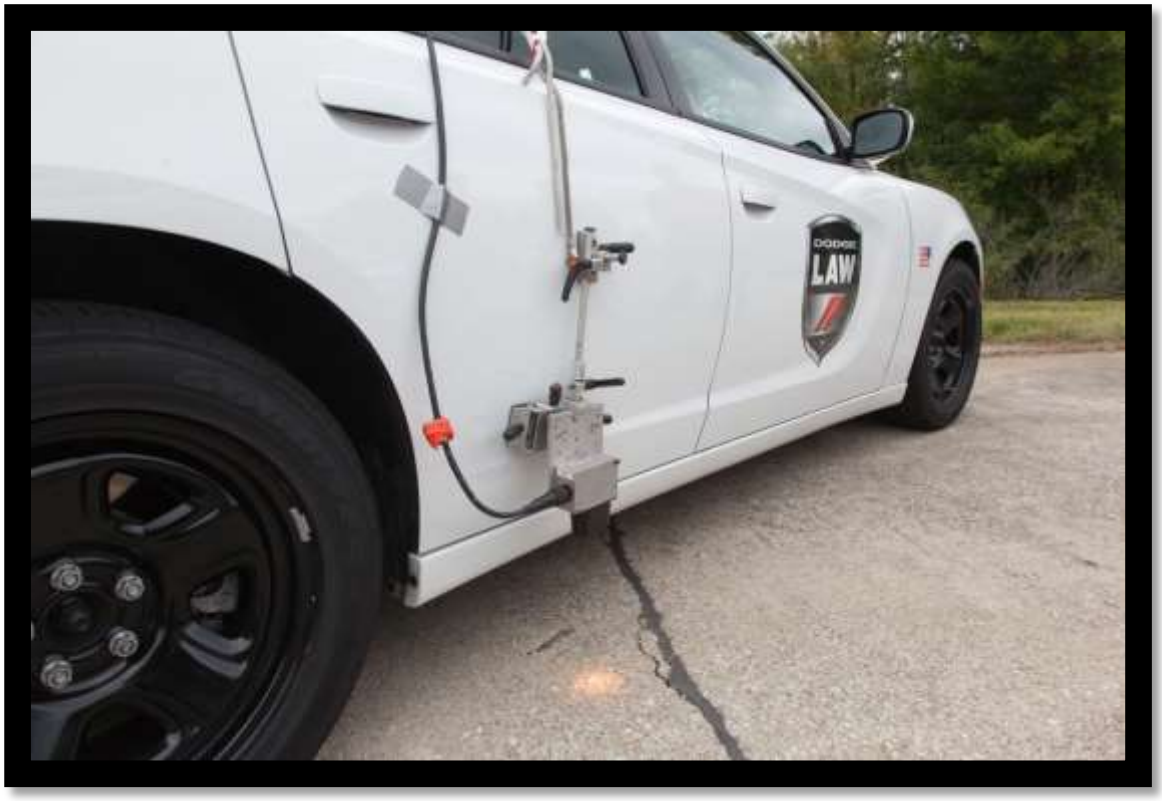
Once a vehicle's average deceleration rate has been determined, it is possible to calculate the stopping distance from any given speed by utilizing the following formula:

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 mph = 88.002 ft/s x 88.002 = 7744.352 / 2 = 3872.176 / 23.198 ft/s^2 = 166.9 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.


DODGE
LAW

BRAKE TESTING

Chevrolet Caprice 3.6L RWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 12:10 p.m.	**TEMPERATURE:** 63.8° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s^2)*
1	60.03	133.08	29.13
2	60.10	128.00	30.35
3	60.13	132.33	29.39
4	60.13	130.82	29.73
5	60.04	129.91	29.84
6	60.12	131.61	29.54
7	60.46	133.55	29.44
8	59.94	129.70	29.80
9	59.66	128.49	29.80
10	60.46	133.21	29.52
AVERAGE DECELERATION RATE:			**29.65 ft/s^2**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s^2)*
1	60.09	130.21	29.83
2	60.23	131.06	29.77
3	60.12	130.68	29.75
4	60.30	130.82	29.90
5	60.28	129.42	30.20
6	60.20	130.44	29.88
7	59.93	129.26	29.88
8	59.53	129.08	29.53
9	60.27	130.32	29.98
10	60.27	132.76	29.43
AVERAGE DECELERATION RATE:			**29.82 ft/s^2**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**29.74 ft/s^2**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**130.2 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

All Vehicles Tested are Equipped with Anti-Lock Brakes*

BRAKE TESTING

Chevrolet Caprice 6.0L RWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 5:16 p.m.	**TEMPERATURE:** 65.9° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.99	131.41	29.46
2	60.00	128.05	30.24
3	59.93	128.78	29.99
4	60.65	131.94	29.99
5	60.15	128.62	30.26
6	59.96	129.28	29.92
7	59.81	129.58	29.69
8	59.15	131.76	28.56
9	60.18	131.48	29.62
10	59.86	130.92	29.44
AVERAGE DECELERATION RATE:			**29.72 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.42	129.80	30.25
2	60.47	131.84	29.83
3	60.40	131.61	29.82
4	59.77	127.73	30.08
5	60.02	128.31	30.20
6	60.01	129.68	29.87
7	60.21	132.62	29.40
8	60.08	129.08	30.07
9	59.99	130.64	29.63
10	60.42	131.95	29.76
AVERAGE DECELERATION RATE:			**29.89 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**29.81 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**129.9 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

All Vehicles Tested are Equipped with Anti-Lock Brakes*

BRAKE TESTING

Chevrolet Impala 3.6L FWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 2:59 p.m.	**TEMPERATURE:** 68.3° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.93	135.61	28.49
2	60.05	133.23	29.11
3	59.90	133.68	28.87
4	59.67	135.25	28.31
5	60.37	135.51	28.93
6	59.82	137.43	28.01
7	60.24	136.50	28.59
8	59.72	137.98	27.80
9	59.69	134.10	28.57
10	60.31	140.73	27.80
AVERAGE DECELERATION RATE:			**28.45 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.80	137.80	27.91
2	60.05	132.73	29.22
3	59.66	132.28	28.94
4	59.95	136.16	28.39
5	59.93	134.04	28.82
6	59.80	134.82	28.53
7	59.85	135.91	28.35
8	60.44	137.46	28.58
9	60.06	135.60	28.61
10	60.14	138.57	28.08
AVERAGE DECELERATION RATE:			**28.54 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.50 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**135.9 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Chevrolet Tahoe 5.3L RWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 6:39 p.m.	**TEMPERATURE:** 63.9° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.86	134.31	28.70
2	59.74	130.59	29.39
3	60.29	140.76	27.77
4	59.80	135.29	28.43
5	60.51	136.96	28.76
6	60.15	134.08	29.02
7	59.73	134.69	28.49
8	60.52	135.23	29.13
9	60.04	137.65	28.17
10	60.25	134.92	28.94
AVERAGE DECELERATION RATE:			**28.68 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.11	134.19	28.96
2	59.89	131.08	29.43
3	60.01	135.57	28.57
4	60.18	138.72	28.08
5	60.21	136.48	28.57
6	60.22	136.19	28.64
7	60.20	136.27	28.61
8	60.21	138.47	28.16
9	60.35	139.12	28.16
10	60.45	140.93	27.89
AVERAGE DECELERATION RATE:			**28.51 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.60 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**135.4 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Chevrolet Tahoe 5.3L 4WD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 5:45 p.m.	**TEMPERATURE:** 65.7° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.69	133.32	28.74
2	60.10	132.07	29.42
3	60.06	131.54	29.50
4	60.21	134.08	29.08
5	60.47	136.98	28.71
6	60.12	134.10	28.99
7	60.53	136.09	28.96
8	60.19	135.81	28.69
9	59.90	134.75	28.64
10	60.34	140.38	27.89
AVERAGE DECELERATION RATE:			**28.86 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.70	133.59	28.69
2	60.19	135.92	28.67
3	59.96	137.79	28.07
4	60.00	136.35	28.40
5	59.96	137.82	28.06
6	60.53	138.09	28.54
7	60.35	137.75	28.44
8	60.32	141.14	27.73
9	59.99	138.93	27.86
10	60.25	139.12	28.06
AVERAGE DECELERATION RATE:			**28.25 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.56 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**135.6 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Dodge Charger 3.6L 2.62 RWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 12.47 p.m.	**TEMPERATURE:** 65.1° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.74	122.39	31.37
2	59.99	123.23	31.41
3	60.62	125.93	31.39
4	60.11	125.87	30.88
5	60.48	128.25	30.67
6	59.87	123.23	31.28
7	59.71	125.29	30.61
8	60.07	123.48	31.43
9	60.45	127.03	30.94
10	60.55	125.27	31.48
AVERAGE DECELERATION RATE:			**31.15 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.11	126.61	30.70
2	60.52	126.33	31.18
3	60.05	126.83	30.58
4	60.19	124.15	31.39
5	60.07	126.61	30.65
6	60.16	127.41	30.55
7	59.34	124.42	30.44
8	60.70	128.64	30.81
9	60.22	128.14	30.44
10	59.98	124.51	31.07
AVERAGE DECELERATION RATE:			**30.78 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.97 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**125.0 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Dodge Charger 3.6L 3.08 RWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 2:08 p.m.	**TEMPERATURE:** 65.9° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.23	127.44	30.62
2	60.02	125.38	30.90
3	59.84	124.34	30.98
4	60.51	128.36	30.68
5	59.73	123.32	31.11
6	59.93	123.65	31.24
7	59.59	122.92	31.07
8	59.88	127.19	30.32
9	60.06	124.62	31.13
10	59.78	124.79	30.80
AVERAGE DECELERATION RATE:			**30.89 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.21	128.55	30.33
2	60.08	125.17	31.02
3	60.04	125.58	30.87
4	59.79	123.39	31.16
5	60.01	124.12	31.21
6	59.85	124.56	30.93
7	59.78	123.34	31.17
8	60.14	129.92	29.94
9	60.21	128.24	30.41
10	60.35	127.57	30.71
AVERAGE DECELERATION RATE:			**30.78 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.84 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**125.6 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Dodge Charger 5.7L 2.62 RWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 4:51 p.m.	**TEMPERATURE:** 64.7° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.61	125.75	30.39
2	59.48	120.59	31.55
3	59.92	124.17	31.10
4	59.99	123.63	31.31
5	59.96	122.81	31.49
6	60.14	125.35	31.04
7	60.58	129.59	30.46
8	60.21	127.95	30.47
9	60.39	125.61	31.23
10	60.08	126.90	30.60
AVERAGE DECELERATION RATE:			**30.96 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.06	124.92	31.06
2	60.18	125.90	30.94
3	59.89	126.08	30.60
4	60.24	128.52	30.37
5	60.48	127.49	30.86
6	59.76	126.66	30.33
7	60.20	128.10	30.43
8	60.41	130.78	30.01
9	60.02	125.10	30.97
10	60.38	129.07	30.38
AVERAGE DECELERATION RATE:			**30.60 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.78 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**125.8 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Dodge Charger 5.7L 3.08 AWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 3:55 p.m.	**TEMPERATURE:** 68° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.82	129.96	29.62
2	60.25	126.90	30.77
3	59.81	128.89	29.85
4	59.37	126.54	29.96
5	59.68	124.14	30.86
6	60.26	127.98	30.52
7	59.56	126.40	30.19
8	60.65	131.39	30.11
9	60.72	133.04	29.81
10	60.53	130.39	30.22
AVERAGE DECELERATION RATE:			**30.19 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.50	126.74	30.05
2	60.16	128.04	30.40
3	59.75	128.79	29.82
4	59.85	126.23	30.52
5	59.92	126.89	30.43
6	59.70	126.61	30.28
7	59.87	130.27	29.59
8	59.58	130.03	29.36
9	60.50	132.08	29.81
10	60.24	129.34	30.18
AVERAGE DECELERATION RATE:			**30.04 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.12 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**128.6 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Ford Police Interceptor Sedan 3.5L FWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 2:34 p.m.	**TEMPERATURE:** 66.5° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.84	130.92	29.42
2	60.33	132.65	29.52
3	60.05	133.48	29.06
4	60.19	132.24	29.47
5	59.86	127.60	30.20
6	59.85	130.86	29.44
7	60.38	133.23	29.43
8	60.06	132.58	29.26
9	60.47	134.38	29.27
10	59.92	132.14	29.22
AVERAGE DECELERATION RATE:			**29.43 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.53	135.13	29.17
2	59.64	128.58	29.75
3	59.58	129.42	29.50
4	60.16	133.64	29.13
5	60.12	130.23	29.86
6	59.82	129.35	29.76
7	60.45	134.48	29.23
8	60.27	134.67	29.01
9	60.50	135.04	29.15
10	60.60	134.68	29.33
AVERAGE DECELERATION RATE:			**29.39 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**29.41 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**131.7 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Ford Police Interceptor Sedan 3.7L AWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 1:34 p.m.	**TEMPERATURE:** 63.7° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.58	135.27	28.23
2	60.08	130.52	29.74
3	60.07	135.18	28.71
4	60.11	133.35	29.14
5	60.24	136.20	28.66
6	59.96	134.55	28.74
7	60.56	136.65	28.87
8	59.33	131.82	28.72
9	60.10	133.63	29.07
10	60.45	134.62	29.20
AVERAGE DECELERATION RATE:			**28.91 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.43	135.13	29.07
2	60.02	134.24	28.86
3	60.37	136.22	28.77
4	60.07	133.21	29.14
5	59.89	132.80	29.05
6	59.84	131.36	29.32
7	60.39	133.78	29.32
8	60.11	135.25	28.74
9	60.07	136.90	28.35
10	60.69	136.43	29.04
AVERAGE DECELERATION RATE:			**28.97 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.94 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**133.8 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Ford Police Interceptor Sedan 3.5L Ecoboost AWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 4:21 p.m.	**TEMPERATURE:** 66° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.17	130.56	29.82
2	60.17	133.30	29.21
3	59.94	133.67	28.91
4	60.02	132.22	29.31
5	60.44	134.15	29.29
6	59.85	130.50	29.52
7	60.32	131.14	29.84
8	60.02	132.57	29.23
9	60.14	132.76	29.30
10	59.95	131.46	29.41
AVERAGE DECELERATION RATE:			**29.38 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.09	132.30	29.35
2	60.35	132.31	29.61
3	59.96	131.65	29.37
4	60.36	132.28	29.63
5	59.94	130.28	29.66
6	60.14	132.71	29.31
7	60.51	133.57	29.48
8	59.98	134.92	28.68
9	59.55	131.77	28.94
10	59.92	132.93	29.05
AVERAGE DECELERATION RATE:			**29.31 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**29.35 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**131.9 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

All Vehicles Tested are Equipped with Anti-Lock Brakes*

BRAKE TESTING

Ford Police Interceptor Sedan 2.0L Ecoboost FWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 3:28 p.m.	**TEMPERATURE:** 66.7° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.00	133.92	28.91
2	60.31	134.74	29.04
3	60.00	140.98	27.47
4	59.98	135.96	28.46
5	60.04	138.66	27.96
6	60.14	138.33	28.12
7	59.70	134.70	28.46
8	59.91	133.73	28.87
9	60.14	133.93	29.04
10	60.10	134.72	28.84
AVERAGE DECELERATION RATE:			**28.52 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.56	130.38	29.27
2	59.77	132.01	29.11
3	60.31	134.31	29.12
4	59.94	132.72	29.12
5	59.77	134.86	28.49
6	59.79	132.40	29.04
7	60.21	135.62	28.75
8	60.51	137.58	28.62
9	60.23	133.56	29.22
10	59.70	132.18	29.00
AVERAGE DECELERATION RATE:			**28.97 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.75 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**134.7 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

All Vehicles Tested are Equipped with Anti-Lock Brakes*

BRAKE TESTING

Ford Police Interceptor Utility 3.7L AWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 7:11 p.m.	**TEMPERATURE:** 63.5° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.25	133.40	29.27
2	60.50	129.40	30.43
3	60.38	127.64	30.72
4	60.42	128.92	30.46
5	60.37	127.66	30.71
6	59.58	126.67	30.14
7	60.33	132.16	29.62
8	59.94	129.26	29.89
9	59.93	130.62	29.58
10	60.41	131.10	29.94
AVERAGE DECELERATION RATE:			**30.08 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.48	130.93	30.04
2	60.41	130.49	30.08
3	60.03	129.14	30.01
4	60.80	132.59	29.99
5	60.21	126.87	30.73
6	60.05	127.18	30.50
7	60.45	131.96	29.79
8	60.34	133.61	29.31
9	60.23	130.85	29.81
10	59.93	129.44	29.84
AVERAGE DECELERATION RATE:			**30.01 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.05 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**128.9 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Ford Police Interceptor Utility 3.5L Ecoboost AWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 19, 2015
BEGINNING TIME: 6:09 p.m.	**TEMPERATURE:** 64.6° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.00	130.04	29.78
2	60.63	132.50	29.84
3	59.96	132.83	29.11
4	59.96	128.78	30.03
5	59.67	127.29	30.09
6	60.11	131.21	29.61
7	59.96	130.42	29.65
8	60.65	135.77	29.14
9	59.82	130.19	29.57
10	60.10	132.64	29.29
AVERAGE DECELERATION RATE:			**29.61 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.27	133.16	29.34
2	59.67	127.25	30.10
3	59.71	131.81	29.09
4	60.20	133.34	29.23
5	60.43	134.69	29.16
6	60.27	134.32	29.09
7	60.06	135.81	28.57
8	60.11	131.82	29.49
9	60.38	136.02	28.83
10	59.82	134.41	28.63
AVERAGE DECELERATION RATE:			**29.15 ft/s²**

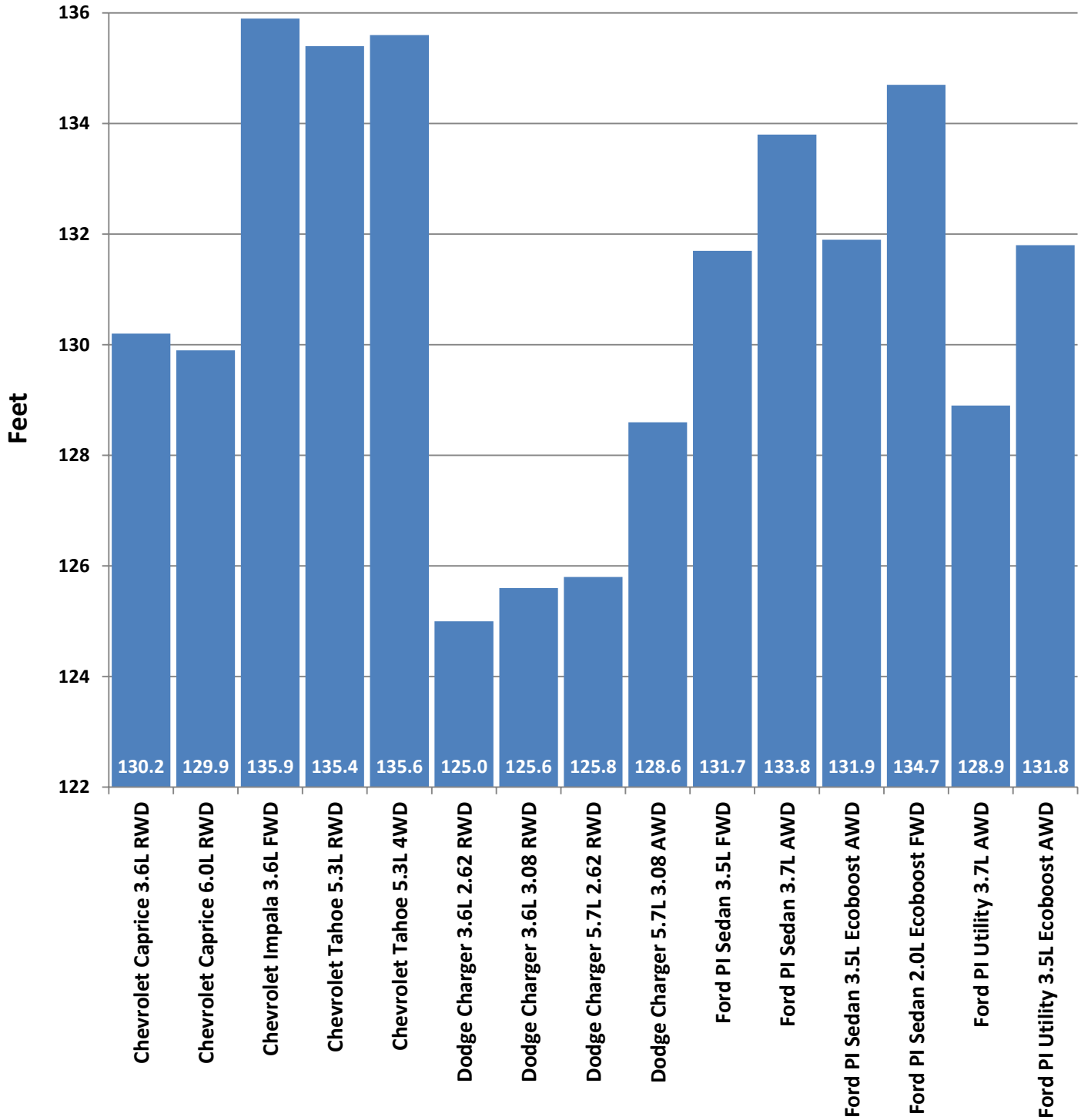
Phase III

OVERALL AVERAGE DECELERATION RATE:	**29.38 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**131.8 feet**

Evidence of Severe Fading?	No
Vehicle Stopped in Straight Line?	Yes
Vehicle Stopped Within Correct Lane?	Yes

*****All Vehicles Tested are Equipped with Anti-Lock Brakes*****

2016 Model Year
Brake Testing
Projected Stopping Distance




POLICE


RWD

ERGONOMICS AND COMMUNICATIONS

TESTING OBJECTIVE

Rate each test vehicle's ability to:

1. Provide a suitable environment for the patrol officer in the performance of his/her assigned tasks.

2. Accommodate the required communications and emergency warning equipment and assess the relative difficulty of such installations.

TESTING METHODOLOGY

Utilizing the Ergonomics and Communications Form (as seen on page 78 of this book) each category is graded on a scale of 1-10, with 1 representing "totally unacceptable," 5 representing "average," and 10 representing "superior." The scores given are averaged to minimize personal prejudice for or against any given vehicle.

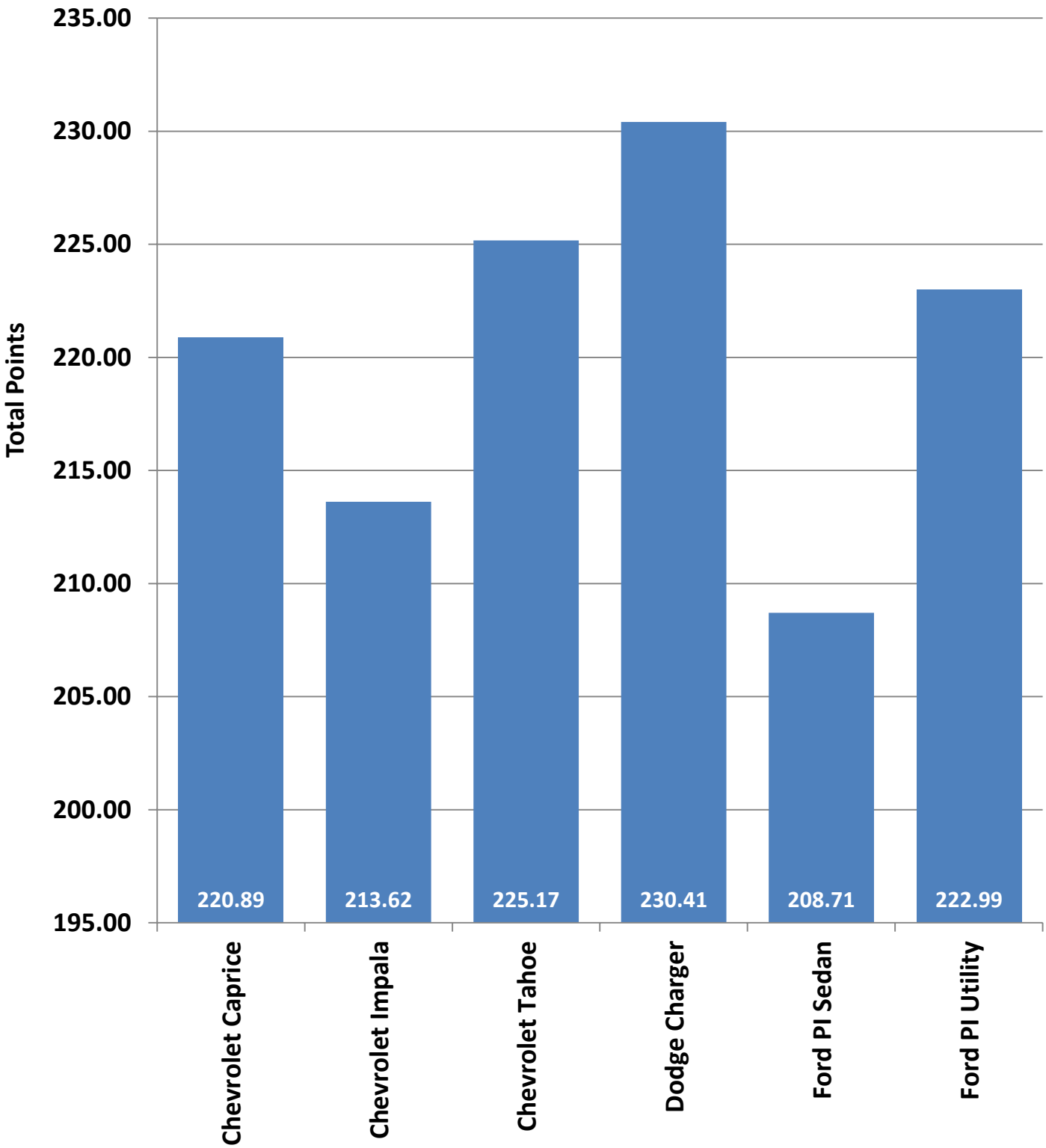
For the ergonomics portion of the form, a minimum of four officers (in this case eight) individually and independently compare and score each test vehicle in several areas. These include comfort, convenience, instrumentation, and visibility.

The installation and communications portion of the evaluation is conducted by personnel from the Michigan Public Safety Communications System. The scores are given based on the relative difficulty of the necessary installations.

ERGONOMICS AND COMMUNICATIONS

	Chevrolet Caprice	Chevrolet Impala	Chevrolet Tahoe	Dodge Charger	Ford Police Interceptor Sedan	Ford Police Interceptor Utility
FRONT SEAT						
Padding	7.50	8.13	8.00	8.13	8.13	8.00
Depth of Bucket Seat	7.88	7.50	7.88	8.25	7.13	7.63
Adjustability – Front to Rear	7.63	7.75	8.88	8.75	8.25	8.00
Upholstery	8.25	7.25	8.00	8.50	7.63	8.00
Bucket Seat Design	7.50	7.13	7.50	7.88	7.63	7.63
Headroom	7.88	7.38	9.75	7.13	8.75	9.25
Seatbelts	8.50	8.13	8.38	8.63	9.00	8.88
Ease of Entry and Exit	7.50	7.13	9.25	7.88	7.25	8.13
Overall Comfort Rating	7.88	7.25	8.25	8.38	7.38	7.88
REAR SEAT						
Leg room – Front seat back	8.50	6.50	8.63	7.38	6.75	7.63
Ease of Entry and Exit	7.25	6.13	8.88	6.63	5.38	7.63
INSTRUMENTATION						
Clarity	8.75	8.13	9.00	9.38	7.75	8.38
Placement	7.88	8.00	8.25	9.00	7.75	8.25
VEHICLE CONTROLS						
Pedals, Size, and Position	8.50	8.50	8.75	9.13	8.50	8.75
Power Window Switch	8.13	8.25	9.38	9.25	7.75	8.75
Automatic Door Lock Switch	8.13	7.50	8.38	9.00	7.13	7.88
Outside Mirror Controls	7.88	7.50	9.00	8.75	7.88	8.50
Steering Wheel, Size, Tilt Release, and Surface	9.00	7.63	8.38	9.38	8.38	8.13
Heat/AC Vent Placement and Adjustability	8.50	8.13	9.00	8.88	8.13	8.13
Trunk Release Switch	8.50	7.75	-	8.63	8.38	7.57
VISIBILITY						
Front (Windshield)	8.25	8.25	8.38	8.00	8.13	8.75
Rear (Back Window)	7.88	7.75	8.13	7.88	6.13	6.63
Left Rear Quarter	7.50	7.50	6.38	7.50	6.75	6.50
Right Rear Quarter	7.63	7.63	6.25	7.50	6.50	6.75
Outside Mirrors	7.38	6.88	8.63	8.63	7.50	7.88
COMMUNICATIONS						
Dashboard Accessibility	6.58	8.05	7.24	7.28	7.55	8.53
Trunk Accessibility	7.40	8.22	8.70	8.28	6.02	8.45
Engine Compartment	6.73	7.67	7.92	6.40	5.20	6.50
TOTAL SCORES	**220.89**	**213.62**	**225.17**	**230.41**	**208.71**	**222.99**

2016 Ergonomics/Communications
Vehicle Scores



FUEL ECONOMY

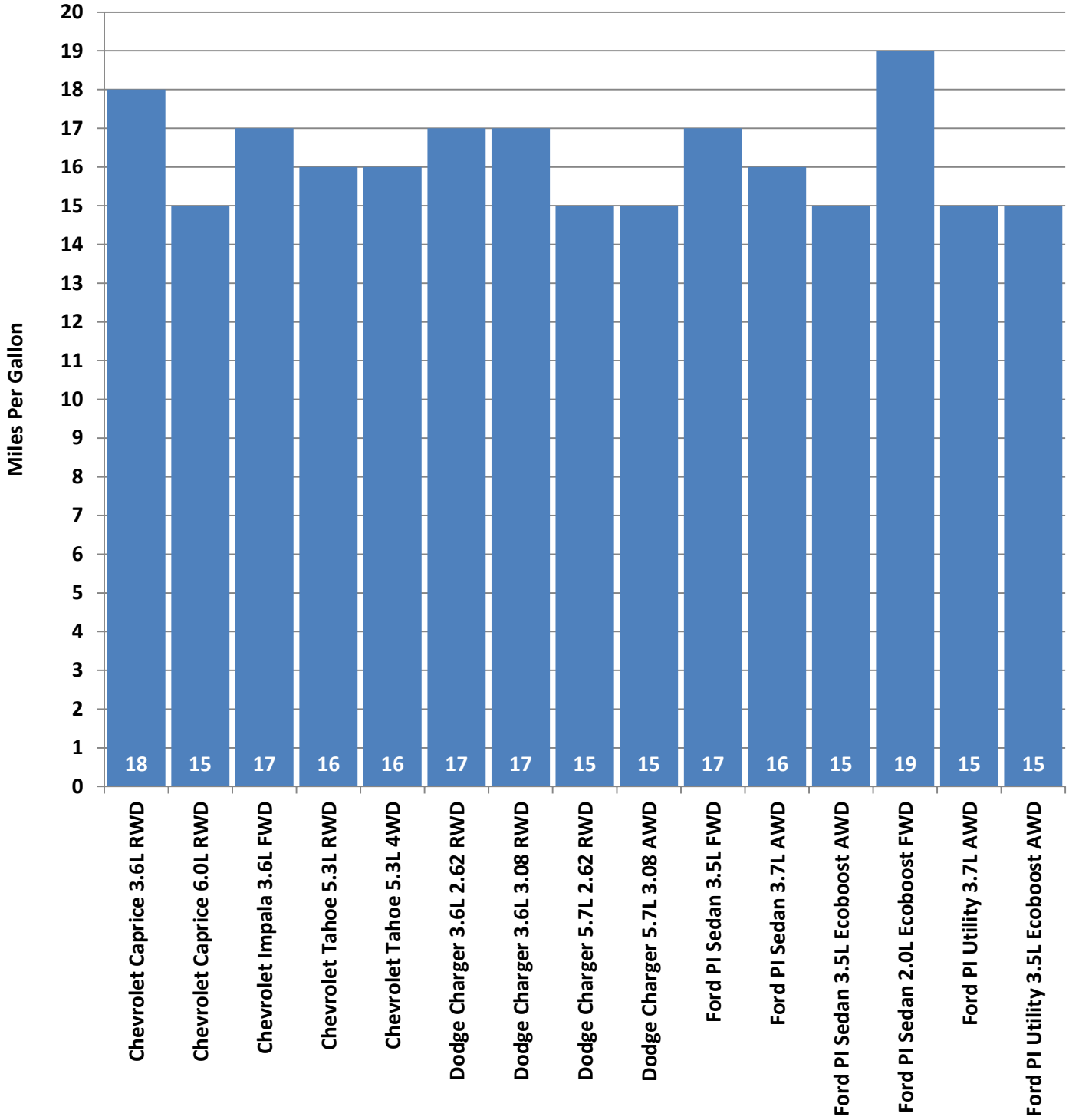
The respective auto manufacturers provided estimates for fuel economy as seen below.

This information has been certified by the Environmental Protection Agency.

Vehicles Make/Model/Engine	E.P.A. Miles Per Gallon		
	City Label	Highway Label	Combined Label
Chevrolet Caprice 3.6L RWD	18	26	21
Chevrolet Caprice 6.0L RWD	15	24	18
Chevrolet Impala 3.6L FWD	17	28	21
Chevrolet Tahoe 5.3L RWD	16	23	18
Chevrolet Tahoe 5.3L 4WD	16	22	18
Dodge Charger 3.6L 2.62 RWD	17	26	20
Dodge Charger 3.6L 3.08 RWD	17	26	20
Dodge Charger 5.7L 2.62 RWD	15	25	18
Dodge Charger 5.7L 3.08 AWD	15	23	18
Ford PI Sedan 3.5L FWD	17	25	20
Ford PI Sedan 3.7L AWD	16	22	18
Ford PI Sedan 3.5L Ecoboost AWD	15	22	18
Ford PI Sedan 2.0L Ecoboost FWD	19	28	22
Ford PI Utility 3.7L AWD	15	20	17
Ford PI Utility 3.5L Ecoboost AWD	15	20	17

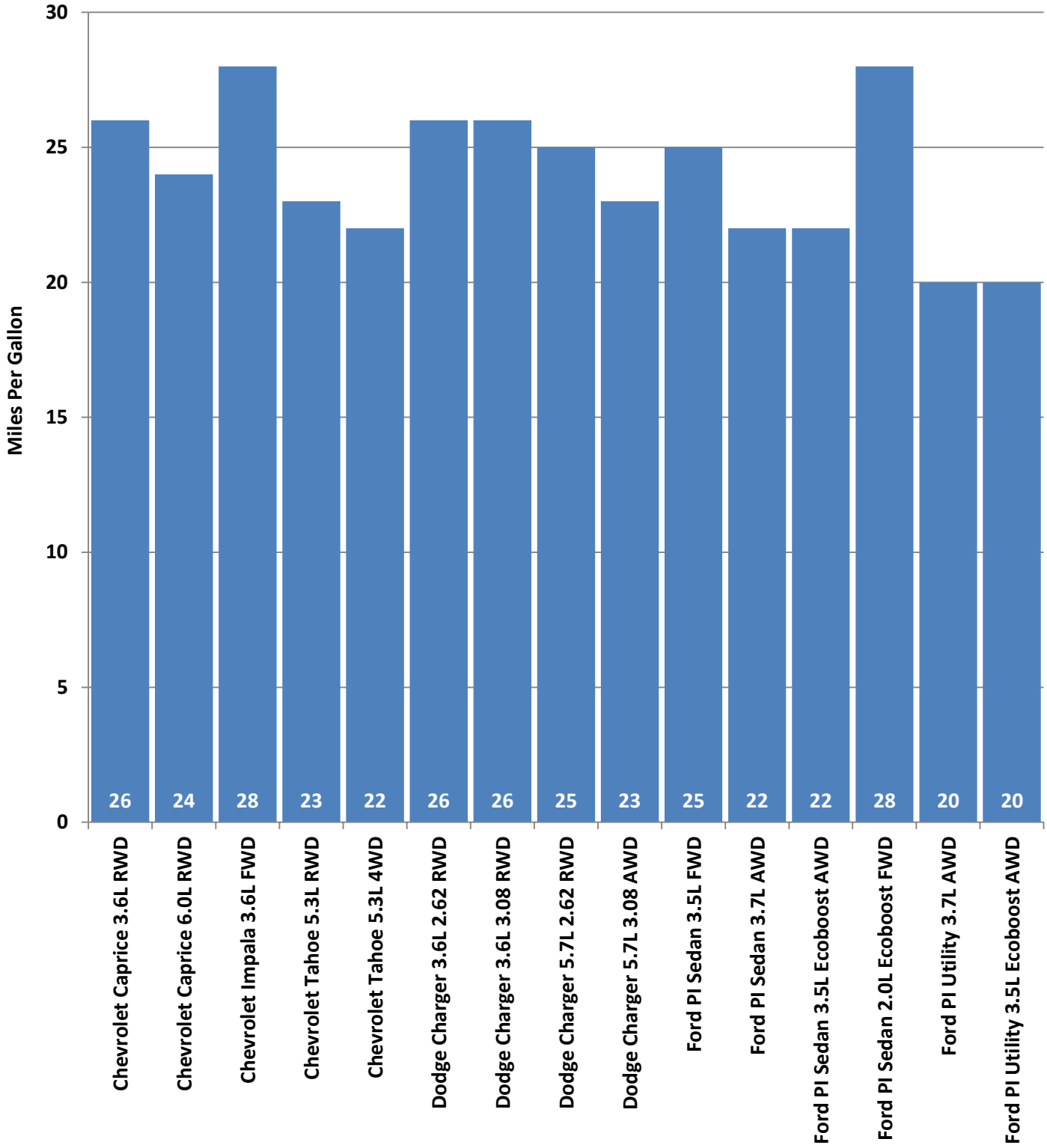
2016 FUEL ECONOMY COMPARISON

"CITY" EPA ESTIMATES



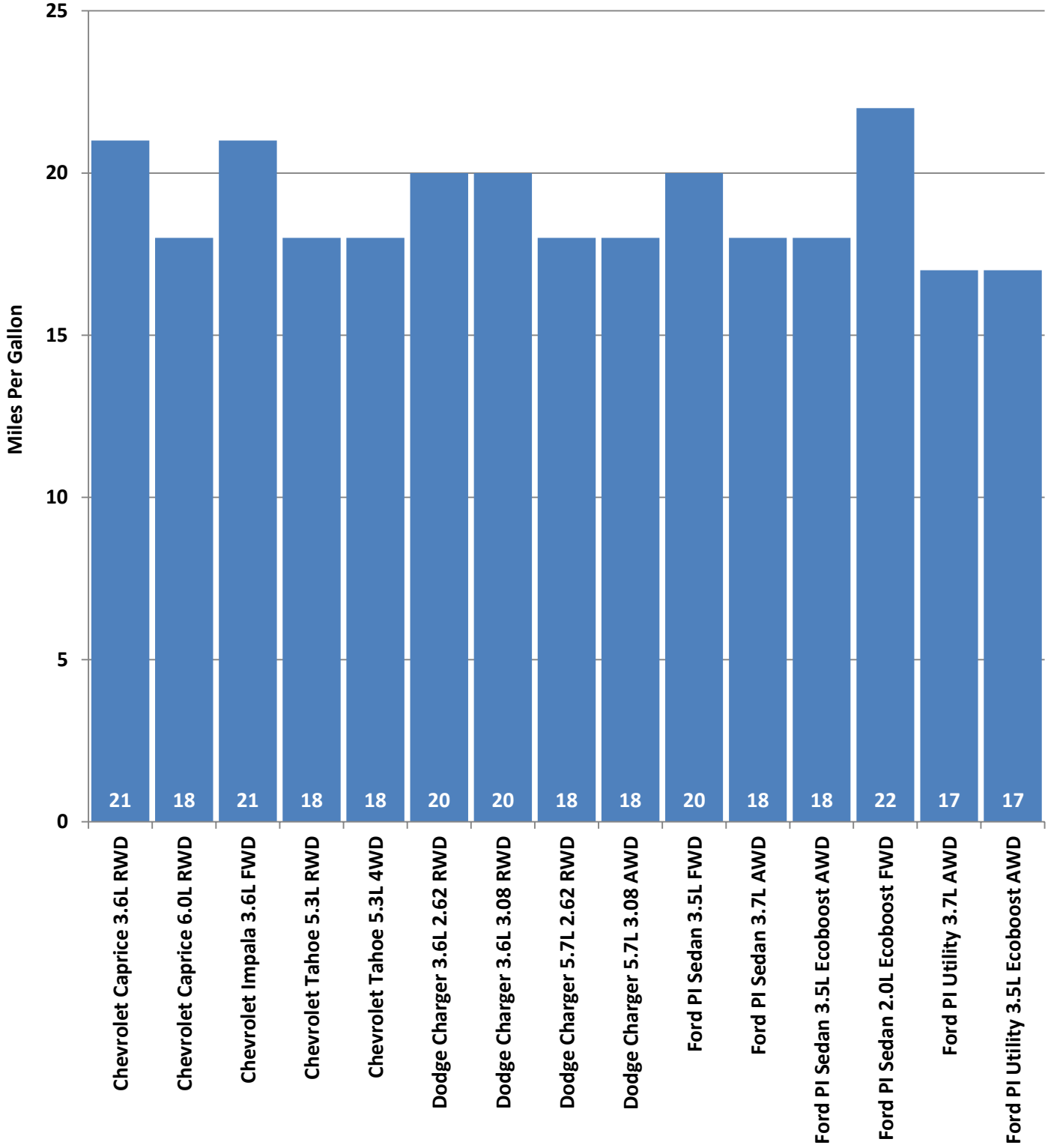
2016 FUEL ECONOMY COMPARISON

"HIGHWAY" EPA ESTIMATES



2016 FUEL ECONOMY COMPARISON

"COMBINED" EPA ESTIMATES



MOTORCYCLES

Like many law enforcement agencies, the Michigan State Police used motorcycles until late 1941 and then switched to automobiles. The Michigan State Police rekindled interest in motorcycles for day to day patrol operations in 1993. In 2004, Michigan State Police headquarters asked if we had additional information as a resource for our purchasing decisions regarding motorcycles. During that time, we were given direction to expand vehicle testing to include motorcycle testing. It should be noted, the only motorcycles we test are those provided by the manufacturers which are purpose built as police motorcycles. We would like to thank BMW Motorrad USA, Harley-Davidson Motorcycles, BRP, and Zero Motorcycles for participating and providing their assistance in preparation for this year's successful testing program.

We are constantly evaluating our various tests with the manufacturers and the law enforcement industry to provide you with the most objective test data available. While there are many similarities to automobiles, there are also quite a few differences.

This year we conducted motorcycle brake testing on our track at the Precision Driving Unit in Lansing. Our facility provides a very flat and consistent surface for this type of testing. Thus, better information is provided to the reader as to the braking capabilities of each motorcycle.

The motorcycle dynamics portion was again conducted at Grattan Raceway. Grattan Raceway provides a two mile road course that has several different curves and elevation changes that tests the motorcycles high speed handling characteristics and durability during pursuit and emergency response riding. See the motorcycle dynamics test objectives for further information.

When looking at the data, it is very important for the reader to apply your mission requirements to the motorcycle you are considering so you may make an appropriate decision. This report is not an endorsement of products, but a means of learning what's available for your officers so they can do their job more effectively and safely. If anything in this report requires further explanation or clarification, please call or write the Michigan State Police Precision Driving Unit.


POLICE

BMW R1200 RT-P

MAKE & MODEL	BMW R 1200 RT-P
SALES CODE	15RP
POWERTRAIN INFORMATION	
CUBIC INCHES	71.4
LITERS	1.170
HORSEPOWER SAENET	125 bhp @ 7,750 RPM
ALTERNATOR	540W
TORQUE	92 @ 6,500 RPM
BATTERY	2 x 16 Ah (AGM no-maintenance batteries)
TRANSMISSION	Constant Mesh 6-Speed with Helical Cut Gears
SUSPENSION TYPE (FRONT)	BMW Telelever, 37 mm stanchions, central spring strut
SUSPENSION TYPE (REAR)	BMW Paralever; travel related damping single strut
TURNING CIRCLE (CURB TO CURB)	16 ft.
TIRE SIZE, LOAD & SPEED RATING	120-70 ZR 17 (Front) / 180-55 ZR 17 (Rear)
GROUND CLEARANCE, MINIMUM	5.2 inches
BRAKE SYSTEM	BMW partial-integral ABS with traction control
FUEL CAPACITY	6.6 Gallons/25 Liters
GENERAL MEASUREMENTS	
WHEELBASE	58.5 inches
LENGTH	87.5 inches
TEST WEIGHT	671 lbs.
HEIGHT	55.7 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,091 lbs.
EPA MILEAGE EST. (MPG)	
CITY	60 MPG (@ 44 mph)
HIGHWAY	44 MPG (@ 75 mph)
COMBINED	Not Provided by Manufacturer

MANUFACTURER HIGHLIGHTS

The R 1200 RT-P is the new generation police motor derived from the K52 platform, inheriting all of the platform improvements of the civil model including standard ABS brakes with traction control and heated handlebar grips.

The new generation contains a multi-plate self-adjusting wet clutch that can be changed in an hour, completely new emergency lighting system, handlebar switch system, power management system for all authority accessories, plus a host of special conveniences including electronic radio box latch release, saddlebag lights, alternating headlight system, selectable emergency light start sequence, narrower/lower seat with heat-reflective material (18° cooler in sun), adjustable dashboard angle, integrated PTT/PTPA switches, etc.

All R 1200 RT-P model include tire pressure monitoring, heated seat, electronic cruise control and weather protection in the standard package. The test motorcycle options include **Ride Modes Pro**, enabling the selection of riding modes **Rain, Road or Dynamic, Gear Shift Assist Pro,** which allows you to shift up or down once the motorcycle is in motion without use of the clutch and additional fog lights, which also wig-wag with the headlight when there is sufficient ambient light (controlled by dashboard light sensor).

The R 1200 RT-P includes 6,000 mile oil change service intervals and comes with a 3-year/60,000 mile limited warranty at no extra charge.

Can-AM Spyder F3

MAKE & MODEL	Can-AM Spyder F3
SALES CODE	Not Provided by Manufacturer
POWERTRAIN INFORMATION	
CUBIC INCHES	81.16
HORSEPOWER SAENET	115
ALTERNATOR	100 Amps (12 V)
TORQUE	96 ft/lbs. @ 5,000 RPM
BATTERY	12V – 21 Ah
TRANSMISSION	6 Speed, Semi-Automatic
SUSPENSION TYPE (FRONT)	Not Provided by Manufacturer
SUSPENSION TYPE (REAR)	Not Provided by Manufacturer
TURNING CIRCLE (CURB TO CURB)	118.11 inches
TIRE SIZE, LOAD & SPEED RATING	MC 165/55/R15 55H (Front) MC 225/50/R15 76H (Rear)
GROUND CLEARANCE, MINIMUM	4.5 inches
BRAKE SYSTEM	Foot Operated, Hydraulic 3-Wheel Brakes
FUEL CAPACITY	7 Gallons/26.5 Liters
GENERAL MEASUREMENTS	
WHEELBASE	67.28 inches
LENGTH	104 inches
TEST WEIGHT	1,015 lbs.
HEIGHT	50 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	405 lbs.
EPA MILEAGE EST. (MPG)	
CITY	Not Provided by Manufacturer
HIGHWAY	Not Provided by Manufacturer
COMBINED	Not Provided by Manufacturer

MANUFACTURER HIGHLIGHTS

The new Spyder F3 delivers an exhilarating experience whether you're carving up the backroads or just cruising Main Street. Its brawny triple has great torque for acceleration, and you hug the road with the lower, more stretched out riding position. The semi-automatic transmission will go with ease from gear to gear with just the push of a button, and when slowing down, you don't even have to downshift; it does it on its own, one gear at a time, leaving your attention on what's important.

Police Pack Specific Features:

- 12 Red/Blue LED Lights Activated by One Switch
- 100 W Siren and Amplifier Activated by Two Switches and the Vehicle Horn
- Wail, Yelp, Piercer, and Air Horn
- Air Horn Override in Emergency Mode (Air Horn is Activated by the Vehicle Standard Horn)
- Sport Touring Windshield
- Driver Backrest
- White Body Panel Kit
- Rear Cargo Box
- 2 USB Outlet, 2x 12V Outlet in the Rear Cargo Box
- Ready for Another Outlet in the Front Cargo
- California Front Steady Red Light Ready
- Front Storage: 6 Gallons
- Rear Storage: 4.23 Gallons

Harley Davidson FLHTP Electra Glide

MAKE & MODEL	Harley-Davidson FLHTP (Electra Glide)
SALES CODE	Not Provided by Manufacturer
POWERTRAIN INFORMATION	
CUBIC INCHES	103 CID
LITERS	1690 CC
HORSEPOWER SAENET	Not Provided by Manufacturer
ALTERNATOR	50 Amp
TORQUE	104.7 @ 3250 RPM
BATTERY	12VDC, 28 Amp/Hour, 270 CCA
TRANSMISSION	6 Speed Manual / Wet 9 Plate Clutch
SUSPENSION TYPE (FRONT)	Hydraulic 49 mm Telescopic Forks
SUSPENSION TYPE (REAR)	Swing Arm with Air Adjustable Shocks
TURNING CIRCLE (CURB TO CURB)	<17’
TIRE SIZE, LOAD & SPEED RATING	Dunlop D408F 130/80B17 (65H) (Front) Dunlop D407T 180/65B16 (81H) (Rear)
GROUND CLEARANCE, MINIMUM	5.3 inches
BRAKE SYSTEM	Hydraulic Disc/Reflex™ Electronically Linked with ABS (Dual Front Floating Rotors – Single Fixed Rear)
FUEL CAPACITY	6.0 Gallons/22.71 Liters
GENERAL MEASUREMENTS	
WHEELBASE	64 inches
LENGTH	96.5 inches
TEST WEIGHT	845 lbs.
HEIGHT	56.3 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	GVWR – 1,360 lbs. / Payload – 534 lbs.
EPA MILEAGE EST. (MPG)	
CITY	Not provided by manufacturer
HIGHWAY	Not provided by manufacturer
COMBINED	42 MPG

MANUFACTURER HIGHLIGHTS

The Harley-Davidson Police Motorcycle FLHTP Electra Glide features:

- Daymaker™ LED Headlight
- Stealth Lighting Capable (rider controlled-disables all lights except brake and Instrumentation)
- Cruise Control
- Emergency Equipment Power for 30 minutes with Ignition OFF or LOCKED
- Digital Speed Readout with Speed Capture
- Gear Indicator
- Engine Oil Cooler
- Polycarbonate Windshield designed to breakaway with minimal impact force
- One-Touch Saddlebag Lid Latches
- Pivoting Footboards
- 103 CID HO Engine
- Reflex™ electronically linked brake system with ABS (delinked below approximately 25 mph)
- Dunlop Multi-Tread Bead Retention Tires
- Long Stem True Vision Mirrors
- 2 Year Unlimited Mileage OE Warranty

Harley Davidson FLHP Road King

MAKE & MODEL	Harley-Davidson FLHP (Road King)
SALES CODE	Not Provided by Manufacturer
POWERTRAIN INFORMATION	
CUBIC INCHES	103 CID
LITERS	1690 CC
HORSEPOWER SAENET	Not Provided by Manufacturer
ALTERNATOR	50 Amp
TORQUE	104.7 @ 3250 RPM
BATTERY	12VDC, 28 Amp/Hour, 270 CCA
TRANSMISSION	6 Speed Manual / Wet 9 Plate Clutch
SUSPENSION TYPE (FRONT)	Hydraulic 49 mm Telescopic Forks
SUSPENSION TYPE (REAR)	Swing Arm with Air Adjustable Shocks
TURNING CIRCLE (CURB TO CURB)	<17’
TIRE SIZE, LOAD & SPEED RATING	Dunlop D408F 130/80B17 (65H) (Front) Dunlop D407T 180/65B16 (81H) (Rear)
GROUND CLEARANCE, MINIMUM	5.3 inches
BRAKE SYSTEM	Hydraulic Disc/Reflex™ Electronically Linked with ABS (Dual Front Floating Rotors – Single Fixed Rear)
FUEL CAPACITY	6.0 Gallons/22.71 Liters
GENERAL MEASUREMENTS	
WHEELBASE	64 inches
LENGTH	96.5 inches
TEST WEIGHT	834 lbs.
HEIGHT	56.3 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	GVWR – 1,360 lbs. / Payload – 539 lbs.
EPA MILEAGE EST. (MPG)	
CITY	Not provided by manufacturer
HIGHWAY	Not provided by manufacturer
COMBINED	42 MPG

MANUFACTURER HIGHLIGHTS

The Harley-Davidson Police Motorcycle Road King features:

- Dual Halogen Headlight
- Stealth Lighting Capable (rider controlled – disables all lights except brake and instrumentation)
- Cruise Control
- Emergency Equipment Power for 30 minutes with Ignition OFF or LOCKED
- Digital Speed Readout with Speed Capture
- Gear Indicator
- Engine Oil Cooler
- Polycarbonate Windshield designed to breakaway with minimal impact force
- One-Touch Saddlebag Lid Latches
- Pivoting Footboards
- 103 CID HO Engine
- Reflex™ electronically linked brake system with ABS (delinked below approximately 25 mph)
- Dunlop Multi-Treat Bead Retention Tires
- Long Stem True Vision Mirrors
- 2 Year Unlimited Mileage OE Warranty

Zero DSP ZF 12.5 ABS

MAKE & MODEL	Zero DSP ZF12.5 ABS
SALES CODE	Not Provided by Manufacturer
POWERTRAIN INFORMATION	
CUBIC INCHES	Not Provided by Manufacturer
LITERS	Not Provided by Manufacturer
HORSEPOWER SAENET	54 HP (40kW) @ 4,300 RPM
ALTERNATOR	Not Provided by Manufacturer
TORQUE	68 ft/lb (92 Nm)
BATTERY	ZForce Li-Ion 12.5 kWh
TRANSMISSION	Clutchless Direct Drive
SUSPENSION TYPE (FRONT)	Not Provided by Manufacturer
SUSPENSION TYPE (REAR)	Not Provided by Manufacturer
TURNING CIRCLE (CURB TO CURB)	Not Provided by Manufacturer
TIRE SIZE, LOAD & SPEED RATING	Pirelli MT-60 100/90-19 (Front) Pirelli MT-60 130/80-17 (Rear)
GROUND CLEARANCE, MINIMUM	9.25 inches
BRAKE SYSTEM	J-Juan Disc, Bosch Gen 9 ABS
FUEL CAPACITY	N/A
GENERAL MEASUREMENTS	
WHEELBASE	56.2 inches
LENGTH	82.5 inches
TEST WEIGHT	474 lbs.
HEIGHT	50.5 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	338 lbs.
EPA MILEAGE EST.	
CITY	409
HIGHWAY	170
COMBINED	Not Provided by Manufacturer

MANUFACTURER HIGHLIGHTS

The Zero DSP ZF12.5 ABS police motorcycle is 100% electric. The DSP is a dual sport with the ability to patrol both on and off-road, and with no emissions, even indoors. With no gears, clutch or noise, officers can focus on patrolling. Having a "Fuel" cost of a penny per mile, and maintenance-free powertrain, the Zero DSP provides a low total cost of ownership with unique advantages over internal combustion driven machines:

- No shifting; instant torque from 0 rpm
- Lightweight and highly maneuverable
- Maintenance-free powertrain
- Life of motorcycle power pack
- Exhaust free; produces minimal heat
- Regenerative braking and coasting
- Blackout switch for stealth operations
- Charge from standard 110V outlet

MOTORCYCLE DYNAMICS TESTING

MOTORCYCLE DYNAMICS TESTING OBJECTIVE

To determine each motorcycle's high speed handling characteristics and performance in comparison to other motorcycles. The course used is a two mile road racing type configuration containing hills, curves, and corners. The course simulates actual conditions encountered in pursuit or emergency driving situations in the field, with the exception of other traffic. The evaluation is a true test of the motorcycle manufacturers in offering balanced packages of acceleration capabilities, suspension components, and braking characteristics.

MOTORCYCLE DYNAMICS TESTING METHODOLOGY

Each motorcycle is ridden over the course a total of 32 timed laps using four separate riders, each riding an eight lap series. The final score for the motorcycle is the combined average (from the four riders) of the five fastest laps for each rider during the eight lap series.

MOTORCYCLE DYNAMICS SCHEDULE

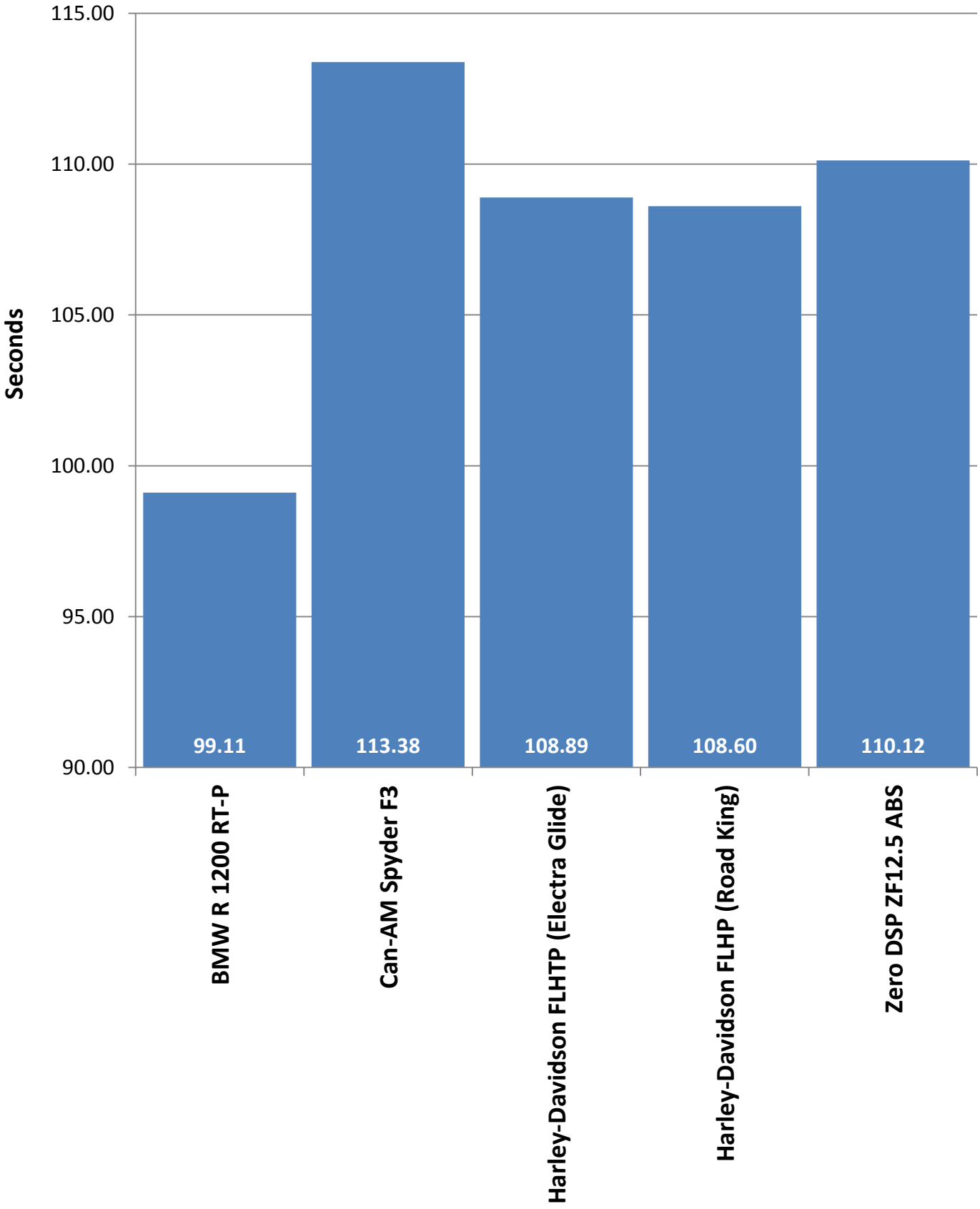
GRATTAN RACEWAY
2016 MODEL YEAR MOTORCYCLE DYNAMICS SCHEDULE
SEPTEMBER 16, 2015

	JOHNSON	ROGERS	SCHWALM	TRAMMEL
9:00 a.m.	**PRACTICE**			
9:30 a.m.	Harley-Davidson Electra Glide FLHTP	Harley-Davidson Road King FLHP	Can-AM Spyder F3	
10:00 a.m.		BMW R 1200 RT-P		Zero DSP ZF 12.5
10:30 a.m.		Harley-Davidson Electra Glide FLHTP	Harley-Davidson Road King FLHP	Can-AM Spyder F3
11:00 a.m.	Zero DSP ZF 12.5		BMW R 1200 RT-P	
11:30 a.m.	Harley-Davidson Road King FLHP	Can-AM Spyder F3		Harley-Davidson Electra Glide FLHTP
LUNCH BREAK				
12:30 a.m.	BMW R 1200 RT-P		Zero DSP ZF 12.5	
1:00 p.m.	Can-AM Spyder F3		Harley-Davidson Electra Glide FLHTP	Harley-Davidson Road King FLHP
1:30 p.m.		Zero DSP ZF 12.5		BMW R 1200 RT-P

MOTORCYCLE DYNAMICS TESTING ON SEPTEMBER 16, 2015

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
BMW R 1200 RT-P	JOHNSON	01:37.42	01:37.47	01:38.04	01:38.21	01:38.37	01:37.90
	ROGERS	01:37.55	01:37.57	01:37.93	01:38.30	01:38.30	01:37.93
	SCHWALM	01:39.77	01:40.08	01:40.30	01:40.46	01:40.52	01:40.23
	TRAMMEL	01:40.02	01:40.24	01:40.32	01:40.63	01:40.72	01:40.39
Overall Average							**01:39.11**
Can-AM Spyder F3	JOHNSON	01:52.67	01:54.27	01:54.70	01:54.87	01:55.15	01:54.33
	ROGERS	01:51.61	01:52.03	01:52.18	01:52.24	01:52.47	01:52.11
	SCHWALM	01:52.56	01:54.07	01:54.13	01:54.43	01:54.61	01:53.96
	TRAMMEL	01:52.94	01:53.05	01:53.11	01:53.20	01:53.27	01:53.11
Overall Average							**01:53.38**
Harley-Davidson FLHTP (Electra Glide)	JOHNSON	01:47.22	01:47.27	01:47.29	01:47.40	01:47.80	01:47.40
	ROGERS	01:47.53	01:47.85	01:48.13	01:48.15	01:48.32	01:48.00
	SCHWALM	01:50.18	01:50.33	01:50.49	01:50.62	01:50.67	01:50.46
	TRAMMEL	01:49.56	01:49.57	01:49.58	01:49.91	01:49.92	01:49.71
Overall Average							**01:48.89**
Harley-Davidson FLHP (Road King)	JOHNSON	01:46.06	01:46.10	01:46.12	01:46.30	01:46.34	01:46.18
	ROGERS	01:48.11	01:48.21	01:48.41	01:48.43	01:48.54	01:48.34
	SCHWALM	01:49.51	01:50.20	01:50.40	01:50.55	01:50.65	01:50.26
	TRAMMEL	01:49.43	01:49.57	01:49.68	01:49.68	01:49.73	01:49.62
Overall Average							**01:48.60**
Zero DSP ZF12.5 ABS	JOHNSON	01:47.19	01:47.66	01:49.86	01:50.36	01:51.88	01:49.39
	ROGERS	01:47.76	01:49.06	01:49.23	01:49.83	01:50.88	01:49.35
	SCHWALM	01:49.40	01:49.96	01:51.30	01:52.06	01:52.17	01:50.98
	TRAMMEL	01:48.57	01:50.11	01:51.20	01:51.68	01:52.31	01:50.77
Overall Average							**01:50.12**

2016 Motorcycle Dynamics



MOTORCYCLE ACCELERATION
&
TOP SPEED TESTING

ACCELERATION TEST OBJECTIVE

To determine the ability of each test motorcycle to accelerate from a standing start to 60 mph, 80 mph, and 100 mph.

ACCELERATION TEST METHODOLOGY

Using a Kistler CDS-GPS-CGPLSA 100 hz Logger, each motorcycle is driven through four acceleration sequences, two northbound and two southbound, to allow for wind direction. The four resulting times for each target speed are averaged and the average times are used to derive scores for acceleration. To ensure accuracy, the same rider performs the test for all motorcycles.

TOP SPEED TEST OBJECTIVE

To determine the actual top speed attainable by each test motorcycle within a distance of 14 miles from a standing start.

TOP SPEED TEST METHODOLOGY

Following the fourth acceleration run, each test motorcycle will continue to accelerate to the top speed attainable within 14 miles from the start of the run. The highest speed attained within the 14-mile distance will be recorded as the vehicle's top speed.

TEST LOCATION: FCA Proving Grounds **DATE:** September 19, 2015

BMW R 1200 RT-P

BEGINNING TIME: 3:51 p.m. **TEMPERATURE:** 68° F
WIND VELOCITY: 11.6 mph **WIND DIRECTION:** 311°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	5.03	4.35	4.20	4.09	**4.42**
0 – 80	7.03	6.49	6.27	6.23	**6.51**
0 – 100	10.36	10.18	9.45	9.75	**9.94**

DISTANCE TO REACH 100 MPH: .17 mile
DISTANCE TO REACH 120 MPH: .27 mile

TOP SPEED ATTAINED: 137 mph

DISTANCE TO REACH TOP SPEED: 12.86 miles
TIME TO REACH TOP SPEED: 359.26 seconds

Can-AM Spyder F3

BEGINNING TIME: 5:07 p.m. **TEMPERATURE:** 65.8° F
WIND VELOCITY: 13.6 mph **WIND DIRECTION:** 295°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	5.13	5.52	5.63	5.06	**5.34**
0 – 80	8.47	9.04	8.85	8.73	**8.77**
0 – 100	14.26	15.78	14.65	14.64	**14.83**

DISTANCE TO REACH 100 MPH: .27 mile
DISTANCE TO REACH 120 MPH: 3.23 miles

TOP SPEED ATTAINED: 121 mph

DISTANCE TO REACH TOP SPEED: 3.45 miles
TIME TO REACH TOP SPEED: 114.88 seconds

Harley-Davidson FLHTP (Electra Glide)

BEGINNING TIME: 3:00 p.m. **TEMPERATURE:** 68.5° F
WIND VELOCITY: 18.6 mph **WIND DIRECTION:** 299°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	5.56	6.19	6.18	5.93	**5.97**
0 – 80	9.67	11.03	10.31	10.46	**10.37**
0 – 100	17.07	23.90	19.42	23.63	**21.01**

DISTANCE TO REACH 100 MPH: 0.42 mile
DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 109 mph

DISTANCE TO REACH TOP SPEED: 7.20 miles
TIME TO REACH TOP SPEED: 259.47 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 19, 2015

Harley-Davidson FLHP (Road King)

BEGINNING TIME: 4:36 p.m. **TEMPERATURE:** 64.6° F
WIND VELOCITY: 11.4 mph **WIND DIRECTION:** 275°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	5.72	5.45	5.30	5.41	**5.47**
0 – 80	9.25	9.59	9.07	9.77	**9.42**
0 – 100	17.79	17.01	17.38	15.27	**16.86**

DISTANCE TO REACH 100 MPH: 0.31 mile
DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 107 mph

DISTANCE TO REACH TOP SPEED: 3.31 miles
TIME TO REACH TOP SPEED: 122.63 seconds

Zero DSP ZF12.5 ABS

BEGINNING TIME: 12:56 p.m. **TEMPERATURE:** 64.4° F
WIND VELOCITY: 19.2 mph **WIND DIRECTION:** 289°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.69	6.93	6.83	7.10	**6.89**
0 – 80	9.97	10.54	10.04	10.68	**10.31**
0 – 100	N/A	N/A	N/A	N/A	N/A

DISTANCE TO REACH 100 MPH: N/A
DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 95 mph

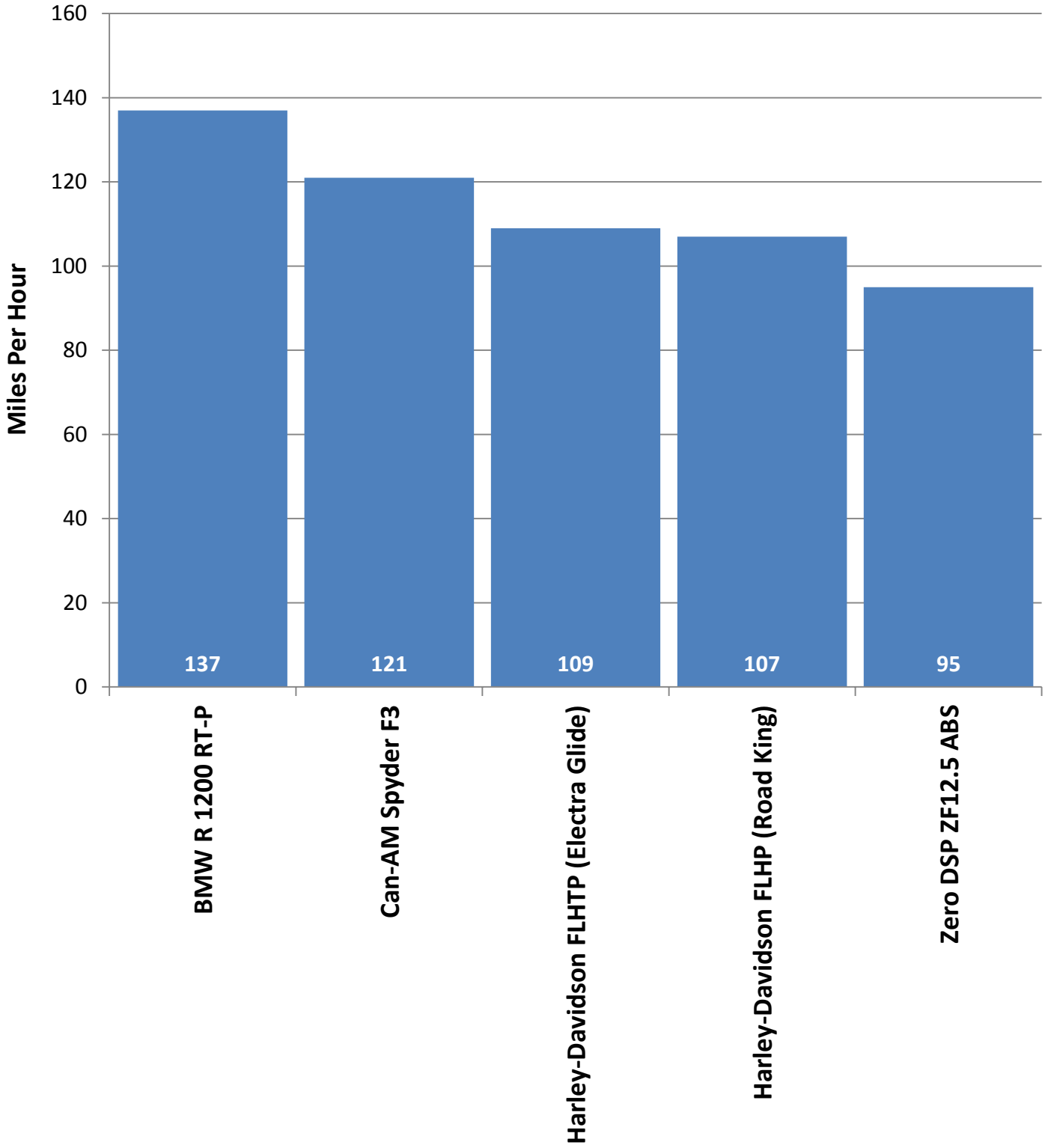
DISTANCE TO REACH TOP SPEED: 0.34 mile
TIME TO REACH TOP SPEED: 19.08 seconds

SUMMARY OF MOTORCYCLE ACCELERATION & TOP SPEED

	BMW R 1200 RT-P	Can-AM Spyder F3	Harley-Davidson FLHTP (Electra Glide)	Harley-Davidson FLHP (Road King)	Zero DSP ZF 12.5 ABS
ACCELERATION					
0 – 20 mph (seconds)	1.49	1.45	1.47	1.46	2.10
0 – 30 mph (seconds)	2.12	2.28	2.29	2.25	3.21
0 – 40 mph (seconds)	2.76	3.08	3.21	3.07	4.37
0 – 50 mph (seconds)	3.62	4.15	4.46	4.19	5.58
0 – 60 mph (seconds)	4.42	5.34	5.97	5.47	6.89
0 – 70 mph (seconds)	5.38	6.80	7.82	7.24	8.36
0 – 80 mph (seconds)	6.51	8.77	10.37	9.42	10.31
0 – 90 mph (seconds)	7.99	11.52	14.07	12.98	13.42
0 – 100 mph (seconds)	9.94	14.83	21.01	16.86	N/A
TOP SPEED (mph)	137	121	109	107	95
DISTANCE TO REACH					
100 mph (miles)	.17	.27	0.42	0.31	N/A
120 mph (miles)	.27	3.23	N/A	N/A	N/A
Top Speed (miles)	12.86	3.45	7.20	3.31	0.34
QUARTER MILE					
Time (seconds)	12.65	14.13	14.73	14.46	15.38
Speed (mph)	109.83	97.64	91.85	93.38	93.36

2016 Motorcycle Top Speed Comparison

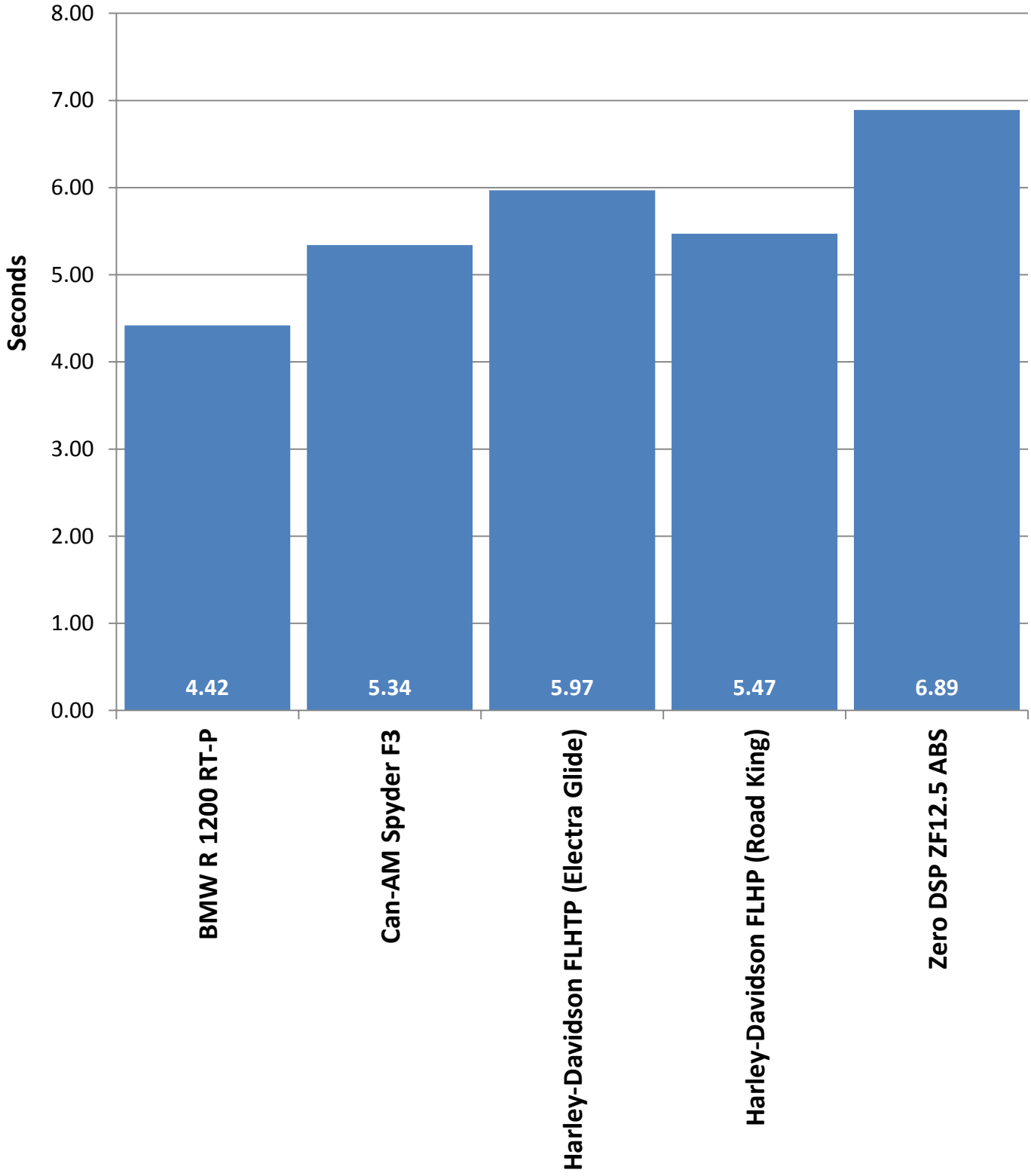
Top Speed Attained



2016 Motorcycle Acceleration Comparison

Acceleration Times

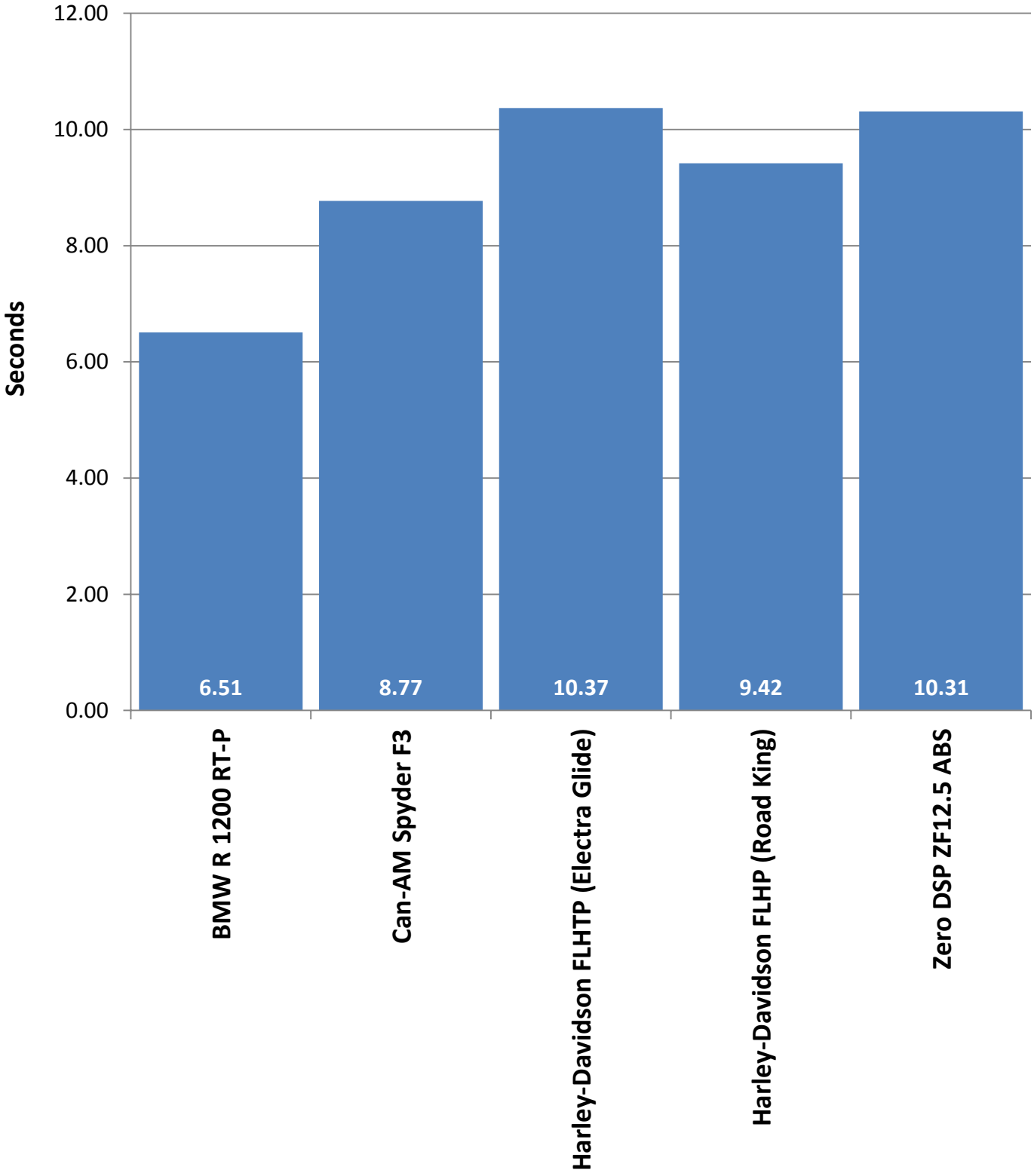
0-60 mph



2016 Motorcycle Acceleration Comparison

Acceleration Times

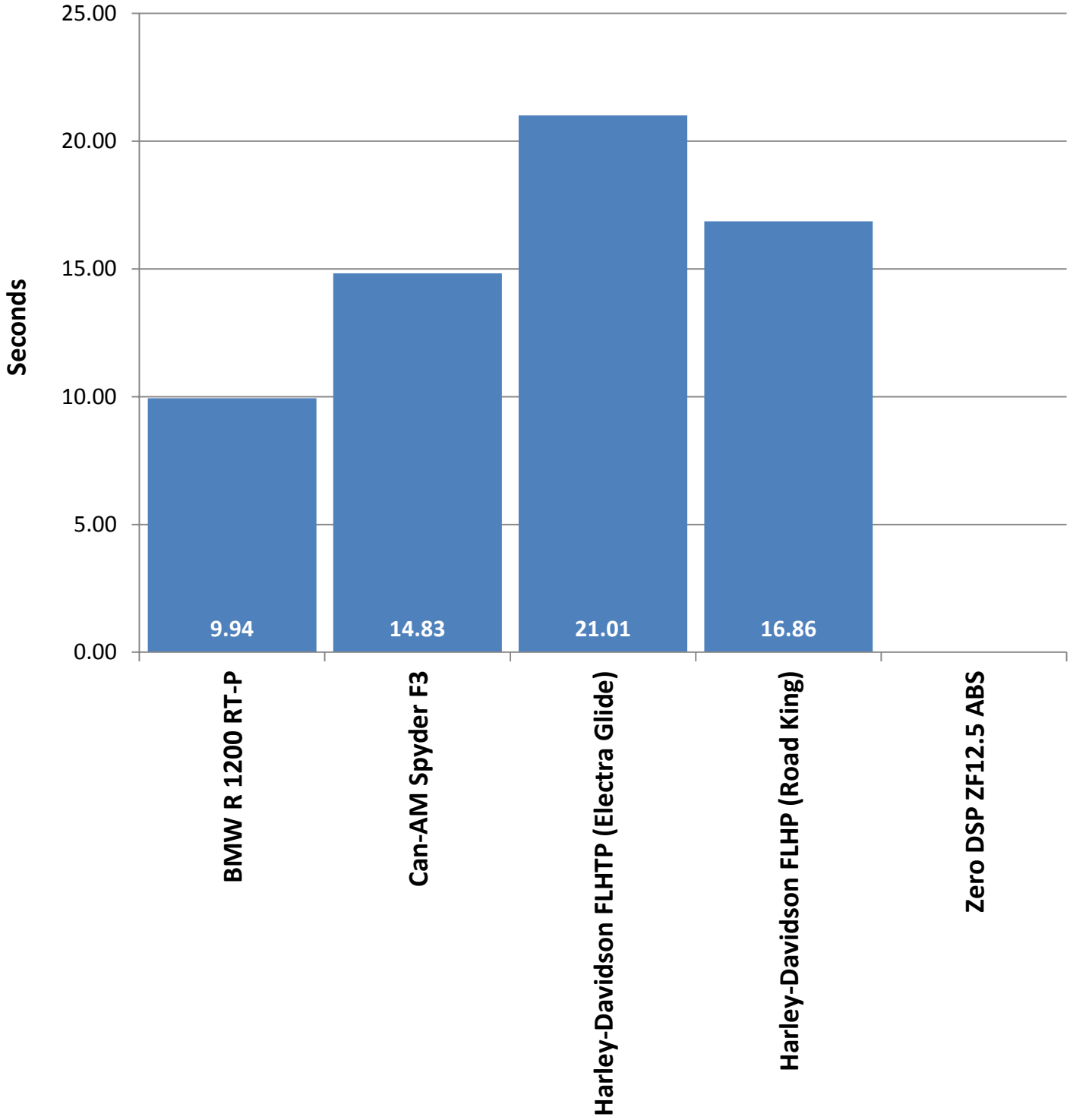
0-80 mph



2016 Motorcycle Acceleration Comparison

Acceleration Times

0-100 mph



MOTORCYCLE BRAKE TESTING

BRAKE TEST OBJECTIVE

To determine the deceleration rate attained by each test motorcycle on twenty 60 – 0 mph full ABS maximum deceleration panic stops. Each motorcycle will be scored on the average deceleration rate it attains.

BRAKE TEST METHODOLOGY

Each motorcycle makes ten measured 60 – 0 mph full ABS maximum deceleration panic stops, at specific predetermined points. After a one-mile lap to cool the brakes, 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 Kistler CDS-GPS CGPSLA 100 hz SP3 puck & logging unit. The data resulting from the twenty total stops is used to calculate the average deceleration rate which is the motorcycle's score for this test. To ensure consistency, the same rider performs all the stops on every motorcycle.

DECELERATION RATE FORMULA

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

EXAMPLE:

Initial Velocity = 89.175 ft/s (60.8 mph x 1.4667*)
Stopping Distance = 171.4 ft.

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

Once a motorcycle'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 motorcycle in question.

EXAMPLE: 60 mph = 88.002 ft/s x 88.002 = 7744.352 / 2 = 3872.176 / 23.198 ft/s^2 = 166.9 ft.

BRAKE TESTING

BMW R 1200 RT-P

TEST LOCATION: MSP Precision Drive Track	**DATE:** September 15, 2015	**BEGINNING TIME:** 11:19 a.m.

AIR TEMPERATURE: 72° F	**TRACK SURFACE TEMPERATURE:** 83° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.52	143.46	26.56
2	60.97	140.84	28.39
3	59.50	140.26	27.15
4	60.24	135.69	28.77
5	60.34	141.04	27.77
6	60.53	143.48	27.47
7	60.22	140.50	27.76
8	60.38	140.00	28.01
9	60.56	142.06	27.77
10	60.32	136.71	28.63
AVERAGE DECELERATION RATE:			**27.83 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.12	142.62	27.26
2	59.88	137.19	28.11
3	60.02	138.86	27.90
4	58.96	131.87	28.35
5	61.41	143.32	28.30
6	60.80	140.20	28.36
7	60.08	131.56	29.51
8	60.58	139.65	28.27
9	59.96	133.27	29.02
10	59.74	129.75	29.59
AVERAGE DECELERATION RATE:			**28.47 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.15 ft/s²**

PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**137.6 feet**

Evidence of Severe Fading?	No
Motorcycle Stopped in Straight Line?	Yes
Motorcycle Stopped Within Correct Lane?	Yes

*****All Motorcycles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Can-AM Spyder F3

TEST LOCATION: MSP Precision Drive Track	**DATE:** September 15, 2015	**BEGINNING TIME:** 9:26 a.m.

AIR TEMPERATURE: 66° F	**TRACK SURFACE TEMPERATURE:** 70° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	61.75	135.75	30.21
2	59.10	139.00	27.03
3	60.93	125.55	31.81
4	60.31	131.48	29.76
5	59.73	122.81	31.25
6	60.32	126.36	30.97
7	58.22	118.86	30.67
8	59.99	119.02	32.52
9	60.74	123.06	32.25
10	58.84	114.77	32.45
AVERAGE DECELERATION RATE:			**30.89 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.23	122.15	31.94
2	60.86	120.79	32.98
3	60.67	123.86	31.96
4	60.97	123.00	32.51
5	58.96	119.47	31.30
6	61.10	120.07	33.44
7	60.56	122.08	32.31
8	60.24	116.72	33.44
9	61.23	127.10	31.73
10	60.33	121.27	32.28
AVERAGE DECELERATION RATE:			**32.39 ft/s²**

Phase II

OVERALL AVERAGE DECELERATION RATE:	**31.64 ft/s²**

PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**122.4 feet**

Evidence of Severe Fading?	No
Motorcycle Stopped in Straight Line?	Yes
Motorcycle Stopped Within Correct Lane?	Yes

*****All Motorcycles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Harley-Davidson FLHTP (Electra Glide)

TEST LOCATION: MSP Precision Drive Track	**DATE:** September 15, 2015	**BEGINNING TIME:** 10:29 a.m.

AIR TEMPERATURE: 69° F	**TRACK SURFACE TEMPERATURE:** 76° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	61.37	151.74	26.70
2	60.09	153.21	25.35
3	60.30	151.92	25.74
4	59.59	149.05	25.63
5	60.15	150.46	25.86
6	60.98	157.35	25.42
7	60.61	156.48	25.25
8	60.33	157.18	24.91
9	61.57	158.70	25.69
10	61.07	158.72	25.27
AVERAGE DECELERATION RATE:			**25.58 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.54	150.88	26.13
2	60.15	154.07	25.26
3	61.03	162.73	24.62
4	60.85	156.17	25.50
5	61.27	154.20	26.19
6	60.10	150.37	25.84
7	61.33	155.99	25.94
8	60.91	151.39	26.36
9	59.69	149.22	25.68
10	59.98	149.00	25.97
AVERAGE DECELERATION RATE:			**25.75 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**25.67 ft/s²**

PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**150.8 feet**

Evidence of Severe Fading?	No
Motorcycle Stopped in Straight Line?	Yes
Motorcycle Stopped Within Correct Lane?	Yes

*****All Motorcycles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Harley-Davidson FLHP (Road King)

TEST LOCATION: MSP Precision Drive Track	**DATE:** September 15, 2015	**BEGINNING TIME:** 12:48 p.m.

AIR TEMPERATURE: 77° F	**TRACK SURFACE TEMPERATURE:** 96° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	61.03	151.30	26.48
2	60.23	153.45	25.43
3	60.44	150.18	26.16
4	60.25	148.28	26.33
5	60.58	146.43	26.96
6	61.20	151.91	26.52
7	60.94	152.09	26.26
8	60.64	151.81	26.05
9	59.10	146.45	25.65
10	60.31	152.26	25.69
AVERAGE DECELERATION RATE:			**26.15 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	61.08	158.46	25.32
2	60.44	148.56	26.45
3	60.11	145.09	26.79
4	59.73	145.38	26.40
5	59.97	149.04	25.95
6	61.19	158.67	25.38
7	59.77	147.31	26.08
8	60.01	149.67	25.88
9	59.46	153.77	24.73
10	61.29	156.09	25.89
AVERAGE DECELERATION RATE:			**25.89 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**26.02 ft/s²**

PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**148.8 feet**

Evidence of Severe Fading?	No
Motorcycle Stopped in Straight Line?	Yes
Motorcycle Stopped Within Correct Lane?	Yes

*****All Motorcycles Tested are Equipped with Anti-Lock Brakes*****

BRAKE TESTING

Zero DSP ZF12.5 ABS

TEST LOCATION: MSP Precision Drive Track	**DATE:** September 15, 2015	**BEGINNING TIME:** 1:23 p.m.

AIR TEMPERATURE: 79° F	**TRACK SURFACE TEMPERATURE:** 97° F

Phase I

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.85	138.04	27.91
2	60.60	142.70	27.68
3	59.38	137.16	27.65
4	61.66	150.15	27.24
5	59.35	146.30	25.90
6	60.27	139.31	28.05
7	59.98	142.25	27.20
8	60.61	141.03	28.02
9	60.32	140.30	27.89
10	60.62	144.69	27.32
AVERAGE DECELERATION RATE:			**27.49 ft/s²**

(One cool down lap at 45 mph)

Phase II

(Ten 60 – 0 mph full ABS maximum deceleration stops)

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.87	140.91	27.36
2	59.72	141.92	27.03
3	60.00	147.15	26.31
4	60.31	137.15	28.53
5	60.80	145.81	27.27
6	59.46	134.05	28.37
7	60.71	137.18	28.90
8	59.55	127.73	29.86
9	58.70	132.87	27.89
10	61.02	142.85	28.04
AVERAGE DECELERATION RATE:			**27.96 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**27.73 ft/s²**

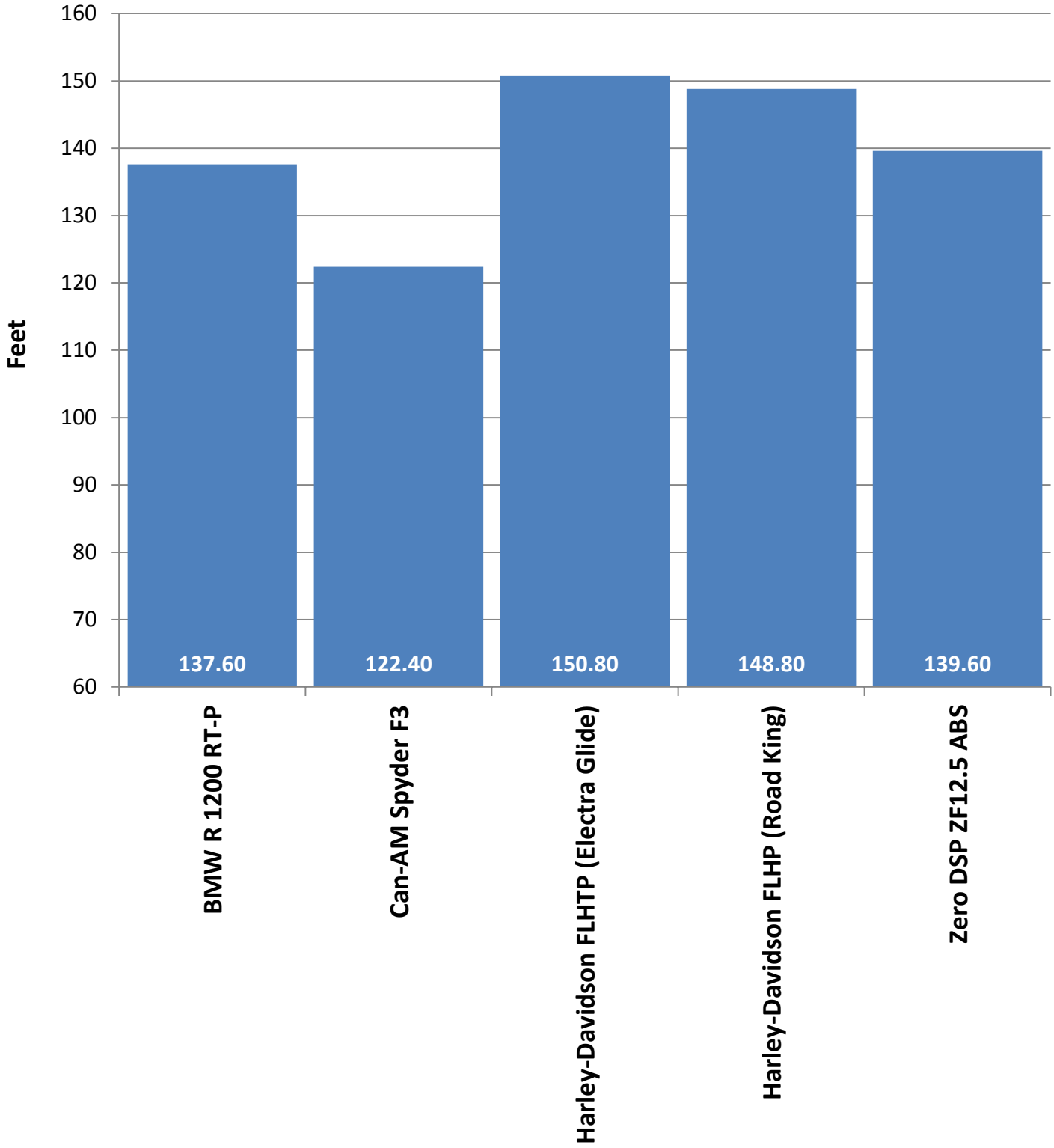
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**139.6 feet**

Evidence of Severe Fading?	No
Motorcycle Stopped in Straight Line?	Yes
Motorcycle Stopped Within Correct Lane?	Yes

*****All Motorcycles Tested are Equipped with Anti-Lock Brakes*****

2016 Motorcycle Brake Testing

Projected Stopping Distance



For Your Information

About the National Institute of Justice

A component of the Office of Justice Programs, NIJ is the research, development and evaluation agency of the U.S. Department of Justice. NIJ's mission is to advance scientific research, development and evaluation to enhance the administration of justice and public safety. NIJ's principal authorities are derived from the Omnibus Crime Control and Safe Streets Act of 1968, as amended (see 42 USC §§ 3721–3723).

The NIJ Director is appointed by the President and confirmed by the Senate. The Director establishes the Institute's objectives, guided by the priorities of the Office of Justice Programs, the U.S. Department of Justice, and the needs of the field. The Institute actively solicits the views of criminal justice and other professionals and researchers to inform its search for the knowledge and tools to guide policy and practice.

Strategic Goals
NIJ has seven strategic goals grouped into three categories:

Creating relevant knowledge and tools

1. Partner with state and local practitioners and policymakers to identify social science research and technology needs.

2. Create scientific, relevant and reliable knowledge — with a particular emphasis on terrorism, violent crime, drugs and crime, cost-effectiveness and community-based efforts — to enhance the administration of justice and public safety.

3. Develop affordable and effective tools and technologies to enhance the administration of justice and public safety.

Dissemination

4. Disseminate relevant knowledge and information to practitioners and policymakers in an understandable, timely and concise manner.

5. Act as an honest broker to identify the information, tools and technologies that respond to the needs of stakeholders.

Agency management

6. Practice fairness and openness in the research and development process.

7. Ensure professionalism, excellence, accountability, cost-effectiveness and integrity in the management and conduct of NIJ activities and programs.

Program Areas
In addressing these strategic challenges, the Institute is involved in the following program areas: crime control and prevention, including policing; drugs and crime; justice systems and offender behavior, including corrections; violence and victimization; communications and information technologies; critical incident response; investigative and forensic sciences, including DNA; less lethal technologies; officer protection; education and training technologies; testing and standards; technology assistance to law enforcement and corrections agencies; field testing of promising programs; and international crime control.

In addition to sponsoring research and development and technology assistance, NIJ evaluates programs, policies and technologies. NIJ communicates its research and evaluation findings through conferences and print and electronic media.

About the Law Enforcement and Corrections Standards and Testing Program

The Law Enforcement and Corrections Standards and Testing Program is sponsored by the Office of Science and Technology of the National Institute of Justice (NIJ), Office of Justice Programs, U.S. Department of Justice. The program responds to the mandate of the Justice System Improvement Act of 1979, which directed NIJ to encourage research and development to improve the criminal justice system and to disseminate the results to federal, state and local agencies.

The Law Enforcement and Corrections Standards and Testing Program is an applied research effort that determines the technological needs of justice system agencies, sets minimum performance standards for specific devices, tests commercially available equipment against those standards, and disseminates the standards and the test results to criminal justice agencies nationwide and internationally.

The program operates through the following:

- The **Law Enforcement and Corrections Technology Advisory Council** (LECTAC), consisting of nationally recognized criminal justice practitioners from federal, state and local agencies, assesses technological needs and sets priorities for research programs and items to be evaluated and tested.
- The **Office of Law Enforcement Standards** (OLES) at the National Institute of Standards and Technology develops voluntary national performance standards for compliance testing to ensure that individual items of equipment are suitable for use by criminal justice agencies. The equipment standards developed by OLES are based on laboratory evaluation of commercially available products in order to devise precise test methods that can be universally applied by any qualified testing laboratory and to establish minimum performance requirements for each attribute of a piece of equipment that is essential to how it functions. OLES-developed standards can serve as design criteria for manufacturers or as the basis for equipment evaluation. The application of the standards, which are highly technical in nature, is augmented through the publication of equipment performance reports and user guides. Individual jurisdictions may use the standards in their own laboratories to test equipment, have equipment tested on their behalf using the standards, or cite the standards in procurement specifications.
- The **National Law Enforcement and Corrections Technology Center** (NLECTC)-National, operated by a grantee, supervises a national compliance testing program conducted by independent laboratories. The standards developed by OLES serve as performance benchmarks against which commercial equipment is measured. In addition, NIJ has begun a new process for developing some standards using Special Technical Committees (STCs), which include practitioners, scientists and subject matter experts. OLES participates in the STC process. The facilities, personnel and testing capabilities of the independent laboratories are evaluated by OLES prior to testing each item of equipment. In addition, OLES helps NLECTC staff review and analyze data. Test results are published in consumer product reports designed to help justice system procurement officials make informed purchasing decisions.

Publications are available at no charge through NLECTC. Some documents are also available online through the Justice Technology Information Network (JUSTNET), the center's World Wide Web site. To request a document or additional information, call (800) 248-2742 or (301) 519-5069 or write:

National Law Enforcement and Corrections Technology Center-National
2277 Research Boulevard
Mail Stop 8J
Rockville, MD 20850
Email: asknlectc@nlectc.org
World Wide Web address: http://www.justnet.org

About the National Law Enforcement and Corrections Technology Center System

The National Law Enforcement and Corrections Technology Center (NLECTC) system recently completed a reorganization that will better enable the system to carry out its critical mission to assist state, major city and county, rural, tribal and border, as well as federal law enforcement, corrections and other criminal justice agencies in addressing their technology needs and challenges. Originally created in 1994 as a program of the National Institute of Justice's (NIJ's) Office of Science and Technology, the NLECTC system has realigned its outreach efforts into three new centers: the States, Major Cities and Counties Regional Center; the Small, Rural, Tribal and Border Regional Center; and the Alaska Regional Center.

The States, Major Cities and Counties Regional Center offers a resource and outreach mechanism for state, major city and county criminal justice system partners, with a mission of ensuring that larger criminal justice agencies (those having 50 or more sworn personnel) have unbiased access to a full range of relevant scientific and technology-related information. The Small, Rural, Tribal and Border Regional Center publicizes its programs and services to small, rural, tribal and border agencies across the country. The Alaska Regional Center serves as a conduit for agencies in Alaska.

The efforts of these centers complement those of NLECTC-National, which coordinates NIJ's Compliance Testing program and standards development efforts for a variety of equipment used in the public safety arena, and the Centers of Excellence (CoEs), which support NIJ's research, development, testing and evaluation (RDT&E) efforts in specific portfolio areas. The CoEs focus on the following topic areas: Communications Technologies; Electronic Crime Technology; Forensics Technology; Information and Sensor Systems; and Weapons and Protective Systems. The National Institute of Standards and Technology's Office of Law Enforcement Standards provides scientific and research support to these efforts.

As a whole, the NLECTC system provides:

- Scientific and technical support to NIJ's RDT&E projects.
- Support for the transfer and adoption of technology into practice by law enforcement and corrections agencies, courts and crime laboratories.
- Assistance in developing and disseminating equipment performance standards and technology guides.
- Assistance in the demonstration, testing and evaluation of criminal justice tools and technologies.
- Technology information and general and specialized technology assistance.
- Assistance in setting NIJ's research agenda by convening practitioner-based advisory groups to help identify criminal justice technology needs and gaps.

The NLECTC system supports NIJ's RDT&E process and goal of setting research priorities based on practitioner needs by sponsoring a series of Technology Working Groups and Constituent Advisory Groups, who provide input to the Law Enforcement and Corrections Technology Advisory Council. Together, these groups form a bridge between the criminal justice community and the NIJ Office of Science and Technology.

For more information, call (800) 248-2742, email: asknlectc@nlectc.org or visit http://www.justnet.org.

About the Office of Law Enforcement Standards

The Office of Law Enforcement Standards (OLES) was established as a matrix management organization in 1971 through a Memorandum of Understanding between the U.S. Departments of Justice and Commerce based on the recommendations of the President's Commission on Crime. OLES' mission is to apply science and technology to the needs of the criminal justice community, including law enforcement, corrections, forensic science and the fire service. While its major objective is to develop minimum performance standards, which are promulgated as voluntary national standards, OLES also undertakes studies leading to the publication of technical reports and user guides.

The areas of research investigated by OLES include clothing, communication systems, emergency equipment, investigative aids, protective equipment, security systems, vehicles, weapons, and analytical techniques and standard reference materials used by the forensic science community. The composition of OLES' projects varies depending on priorities of the criminal justice community at any given time and, as necessary, draws on the resources of the National Institute of Standards and Technology.

OLES assists law enforcement and criminal justice agencies in acquiring, on a cost-effective basis, the high-quality resources they need to do their jobs. To accomplish this, OLES:

- Develops methods for testing equipment performance and examining evidentiary materials.
- Develops standards for equipment and operating procedures.
- Develops standard reference materials.
- Performs other scientific and engineering research as required.

Since the program began in 1971, OLES has coordinated the development of standards, user guides and advisory reports on topics that range from performance parameters of police patrol vehicles, to performance reports on various speed-measuring devices, to soft body armor testing, to analytical procedures for developing DNA profiles.

The application of technology to enhance the efficiency and effectiveness of the criminal justice community continues to increase. The proper adoption of the products resulting from emerging technologies and the assessment of equipment performance, systems, methodologies, etc., used by criminal justice practitioners constitute critical issues having safety and legal ramifications. The consequences of inadequate equipment performance or inadequate test methods can range from inconvenient to catastrophic. In addition, these deficiencies can adversely affect the general population when they increase public safety costs, preclude arrest or result in evidence found to be inadmissible in court.