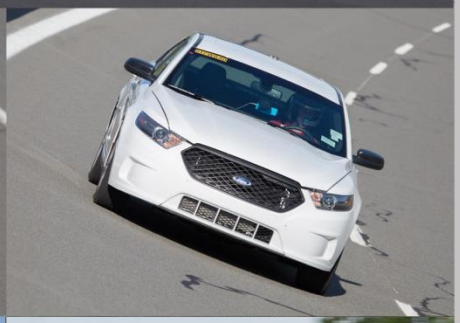
Police Vehicle Evaluation

Model Year 2017

MICHIGAN STATE POLICE

JTIC Justice Technology Information Center



STATE OF MICHIGAN

Department of State Police

and

Department of Technology, Management and Budget

2017 Model Year

Police Vehicle Evaluation Program

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TABLE OF CONTENTS

Preface 1
General Information 2
Evaluation Information 3
Acknowledgements 4
Test Equipment 5

Police Package Vehicle Descriptions
Police Package Vehicle Photographs & Descriptions 7-33

Vehicle Dynamics Testing
Vehicle Dynamics Testing Objective & Methodology 34
Test Facility Diagram 34
Vehicle Dynamics Testing Schedule 35
Vehicle Dynamics Test Data 36-37
Vehicle Dynamics Test Comparison Chart 38

Acceleration and Top Speed Testing
Acceleration and Top Speed Testing Objectives & Methodology 40
Test Facility Diagram 41
Acceleration and Top Speed Data 42-46
Summary of Acceleration and Top Speed 47-49
Acceleration and Top Speed Test Data Comparison Charts 50-53

Brake Testing
Brake Testing Objectives & Methodology 54
Brake Testing Data 56-68
Brake Testing Data Comparison Chart 69

Ergonomics and Communications Evaluation
Ergonomics and Communications Evaluation Objectives & Methodology 71
Ergonomics and Communications Evaluation Test Data 72
Ergonomics and Communications Evaluation Comparison Chart 73

Fuel Economy
Test Data Comparison Chart 74-77

Police Motorcycle Descriptions
Motorcycle Introduction 78
Police Motorcycle Photographs & Descriptions 80-91

Motorcycle Dynamics Testing
Motorcycle Dynamics Testing Objective & Methodology 92
Motorcycle Dynamics Test Data 93
Motorcycle Dynamics Comparison Chart 94

Motorcycle Acceleration and Top Speed Testing
Motorcycle Acceleration and Top Speed Testing Objectives & Methodology 95
Motorcycle Acceleration and Top Speed Data 96-97
Summary of Motorcycle Acceleration and Top Speed 98
Motorcycle Acceleration and Top Speed Comparison Charts 99-102

Motorcycle Brake Testing
Motorcycle Brake Testing Objectives & Methodology 103
Motorcycle Brake Testing Data 104-109
Motorcycle Brake Testing Data Comparison Chart 110

About the National Institute of Justice
The Law Enforcement and Corrections Standards and Testing Program
The Law Enforcement and Corrections Technology Center System, and
The Office of Law Enforcement Standards 111-114

PREFACE

The Michigan State Police Vehicle Test Team is pleased to announce the results of the 2017 Model Year Police Vehicle Evaluation. This year we tested thirteen patrol vehicles and six police 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 Tahoe 5.3L RWD
Chevrolet Tahoe 5.3L 4WD
Dodge Charger 3.6L 2.62 RWD
Dodge Charger 5.7L 2.62 RWD
Dodge Charger 5.7L 3.08 AWD
Ford SSP Sedan 2.0L Ecoboost FWD
Ford PI Sedan 3.5L FWD
Ford PI Sedan 3.7L AWD
Ford PI Sedan 3.5L Ecoboost AWD
Ford PI Utility 3.7L AWD
Ford PI Utility 3.5L Ecoboost AWD

MOTORCYCLES

BMW R 1200 RT-P
Can-AM Spyder F3P
Harley-Davidson FLHTP (Electra Glide)
Harley-Davidson FLHP (Road King)
Harley-Davidson FLHTP (Electra Glide) Stage 3
Zero DSRP

GENERAL INFORMATION

All the patrol vehicles 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 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 eleventh year of police 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:

Grattan Raceway – Motorcycle Dynamics Testing – Zero DSP ZF 12.5

During Motorcycle Dynamics testing, one of the test riders experienced an acceleration skid while in a lean negotiating turn three. The rider was not able to control the motorcycle which subsequently resulted in the motorcycle crashing. Unfortunately, due to the damage of the motorcycle, the Zero was not able to continue with the testing and evaluation for motorcycle dynamics or acceleration and top speed.

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
Mr. Shawn Sible, Deputy Director, Administrative Services Bureau
Capt. Thomas Deasy, Commander, Training Division
Personnel from the Michigan Department of Technology, Management and Budget, Vehicle and Travel Services

The National Institute of Justice, Justice Technology Information Center, Mr. Alex Sundstrom, Leidos.

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 Ms. 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 Fiat Chrysler Automobiles, 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: Tpr. Nick Darlington, Sgt. Mike McCarthy, Tpr. Jeff Mercer, Sgt. Rob Schwalm, Tpr. Tony VanLuchene, Ret. Sgt. David “Doc” Halliday

Front Row: Sgt. Marcus Trammel, F/Lt. Jim Flegel, Ms. Tricia Steel, Sgt. Andy Douville, Sgt. Doug Schutter

Not Pictured: Tpr. Nate Johnson

TEST EQUIPMENT

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

Racelogic USA 27240 Haggerty Rd Suite E17 Farmington Hills, MI 48331	• VBox 3i Data Collection System
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	• Orbits 5.2 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	2017 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 2 service events. See participating dealer for other restrictions and complete details.

Chevrolet Caprice
6.0L RWD

MAKE & MODEL	2017 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 P235/50R18, 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 giving it the highest top speed 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 2 service events. See participating dealer for other restrictions and complete details.

Chevrolet Tahoe
5.3L RWD

MAKE & MODEL	2017 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 2014 model) and 383 lb-ft of torque (an increase of 48 over the 2014 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 2017 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	2017 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 2014 model) and 383 lb-ft of torque (an increase of 48 over the 2014 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 2017 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	2017 Dodge Charger RWD
SALES CODE	27A, Z1B
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)	1,390 lbs.
EPA MILEAGE EST. (MPG)	
CITY	17
HIGHWAY	26
COMBINED	20

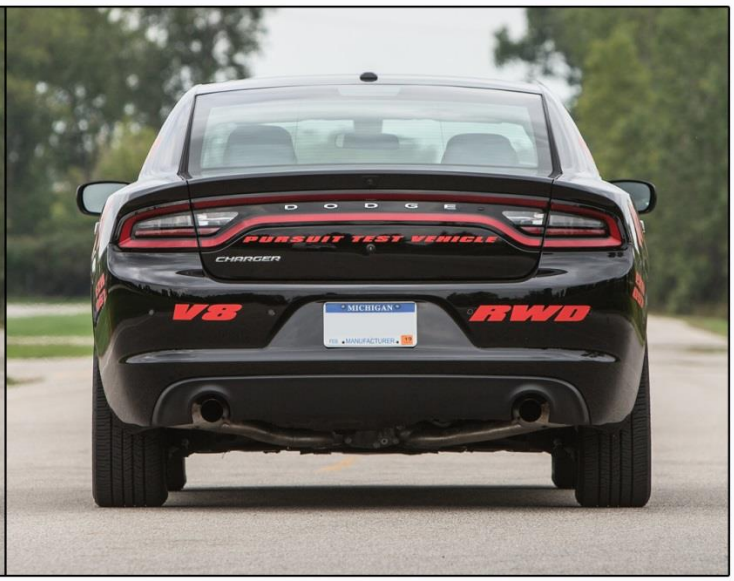
MANUFACTURER VEHICLE HIGHLIGHTS

The 2017 Dodge Charger Pursuit boasts an 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 electric power steering (EPS) system. The 2017 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.

The 2017 Dodge Charger Pursuit 3.6L can now be ordered with an optional 220mm rear axle which increases the payload capacity 200 lbs. Additional 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	2017 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, 220mm
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

The 2017 Dodge Charger Pursuit features an 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.

The 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 2017 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 specially 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	2017 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, 230mm
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 2017 Dodge Charger Pursuit is equipped with an 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 2017 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 2017 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 SSP Sedan
2.0L Ecoboost FWD

MAKE & MODEL	Ford 2.0L Ecoboost Police Interceptor 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 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 SELLING PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY, 2015CY and 2016CY[1]

NEW FEATURES & CHANGES:

- Optional Level IV NIJ Ballistic Panels – protection against armor-piercing rounds
- Optional Police Engine Idle Feature – prevents unauthorized use while engine is running
- Optional Silent Mode – user-selectable; allows disabling of interior lights and Daytime Running Lamps[2]

SAFETY:

- Ultra High Strength Boron Steel Safety Cell Construction
- Optional Level III HIJ Ballistic Panels – certified for LAPD special threat rounds
- Standard Anti-Stab plates in front seat-backs

FUEL ECONOMY:

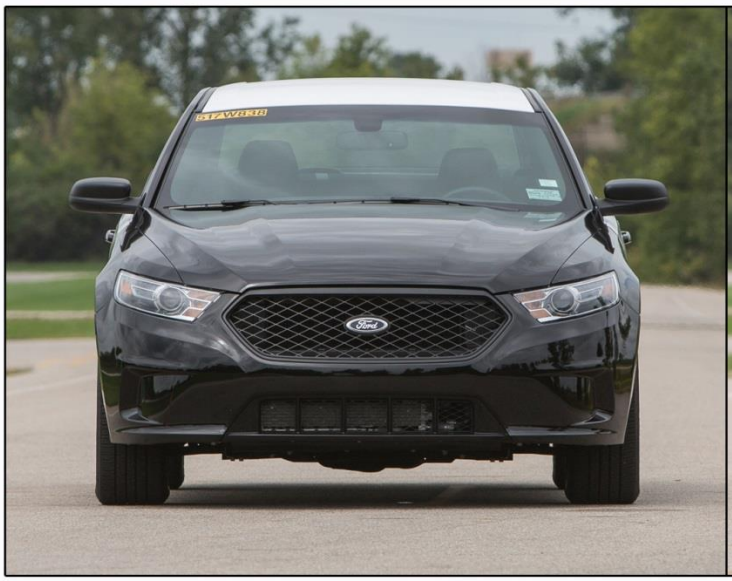
- Provides an EPA-estimated 28 MPG hwy[3]
- Active Grille Shutter system manages airflow to optimally balance engine cooling and Aerodynamics

PERFORMANCE:

- Passed 32-lap vehicle dynamics tests by MSP and LASD in 2015CY
- 2.0L Ecoboost engine provides 240 h[and 270 lb/ft torque

1. The 2016CY based on R.L. Polk Registration data as of May 2016
2. Daytime Running Lamps do not disable where required by law
3. EPA estimated ratings of 19 city / 28 hwy / 22 combined mpg; actual mileage will vary

Ford PI Sedan
3.5L FWD



MAKE & MODEL	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 SELLING PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY, 2015CY, and 2016CY[1]

NEW FEATURES & CHANGES:

- Optional Level IV NIJ Ballistic Panels – protection against armor-piercing rounds
- Optional Police Engine Idle Feature – prevents unauthorized use while engine is running
- Optional Silent Mode – user-selectable; allows disabling of interior lights and Daytime Running Lamps[2]

SAFETY:

- Tested four years running 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
- Optional Level III NIJ Ballistic Panels - Certified for LAPD special threat rounds
- Standard Anti-Stab plates in front seat backs

DURABILITY:

- Two times durability testing, proven real-world durability results

1. The 2016CY is based on R.L. Polk Registration data as of May 2016
2. Daytime Running Lamps do not disable where required by law

Ford PI Sedan
3.7L AWD

MAKE & MODEL	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 SELLING PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY, 2015CY and 2016CY[1]

NEW FEATURES & CHANGES:

- Optional Level IV NIJ Ballistic Panels – protection against armor-piercing rounds
- Optional Police Engine Idle Feature – prevents unauthorized use while engine is running
- Optional Silent Mode – user-selectable; allows disabling of interior lights and Daytime Running Lamps[2]

SAFETY:

- Tested four years running 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
- Optional Level III NIJ Ballistic Panels - Certified for LAPD special threat rounds
- Standard Anti-Stab plates in front seat backs

DURABILITY:

- Two times durability testing, proven real-world durability results

PERFORMANCE:

- Standard Full-Time intelligent AWD
- Available Ecoboost engine with 365 hp and 350 lb/ft torque

1. The 2016CY is based on R.L. Polk Registration data as of May 2016
2. Daytime Running Lamps do not disable where required by law

Ford PI Sedan
3.5L Ecoboost AWD

MAKE & MODEL	Ford Police Interceptor Ecoboost Sedan 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	19.0 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 SELLING PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY, 2015CY, and 2016CY[1]

NEW FEATURES:

- Optional Level IV NIJ Ballistic Panels – protection against armor-piercing rounds
- Optional Police Engine Idle Features – prevents unauthorized use while engine is running
- Optional Silent Mode – user-selectable; allows disabling of interior lights and Daytime Running Lamps[2]

SAFETY:

- Tested four years running 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
- Optional Level III NIJ ballistic panels - Certified for LAPD special threat rounds
- Standard Anti-Stab plates in front seat backs

DURABILITY:

- Two times durability testing, proven real-world durability results

PERFORMANCE:

- Standard Full-Time Intelligent AWD
- Available Ecoboost engine with 365 hp and 350 lb/ft torque

1. The 2016CY is based upon R.L. Polk Registration data as of May 2016
2. Daytime Running Lamps do not disable where required by law

Ford PI Utility
3.7L AWD

MAKE & MODEL	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 SELLING PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY, 2015CY, and 2016CY[1]

NEW FEATURES & CHANGES:

- Optional Level IV NIJ Ballistic Panels – protection against armor-piercing rounds
- Optional Front Interior Visor Light Bar – ultra-low-profile LED light bar, allowing driver full front vision
- Optional Police Engine Idle Feature – prevents unauthorized use while engine is running
- Optional Silent Mode – user-selectable; allows disabling of interior lights and Daytime Running Lamps[1]
- Optional Global Lock/Unlock feature – locks/unlocks all doors and liftgate with fob or door switches (no charge)

SAFETY:

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

DURABILITY:

- Two times durability testing, proven real-world durability results

PERFORMANCE:

- Standard Full-Time Intelligent AWD
- Available Ecoboost engine with 365 hp and 350 lb/ft torque

1. The 2016CY is based upon R.L. Polk Registration data as of May 2016
2. Daytime Running Lamps do not disable where required by law

Ford PI Utility
3.5L Ecoboost AWD

MAKE & MODEL	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 SELLING PURSUIT RATED POLICE BRAND FOR 2013CY, 2014CY, 2015CY, and 2016CY[1]

NEW FEATURES & CHANGES:

- Optional Level IV NIJ Ballistic Panels – protection against armor-piercing rounds
- Optional Front Interior Visor Light Bar – ultra-low-profile LED light bar, allowing driver full front vision
- Optional Police Engine Idle Feature – prevents unauthorized use while engine is running
- Optional Silent Mode – user-selectable; allows disabling of interior lights and Daytime Running Lamps[2]
- Optional Global Lock/Unlock feature – locks/unlocks all doors and liftgate with fob or door switches (no charge)

SAFETY:

- Tested four years running 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
- Optional Level III NIJ Ballistic Panels - Certified for LAPD special threat rounds
- Standard Anti-Stab plates in front seat backs

DURABILITY:

- Two times durability testing, proven real world durability results

PERFORMANCE:

- Standard Full-Time Intelligent AWD
- Available Ecoboost engine with 365 hp and 350 lb/ft torque

1. The 2016CY is based upon R.L. Polk Registration data as of May 2016
2. Daytime Running Lamps do not disable where required by law

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
2017 MODEL YEAR VEHICLE DYNAMICS SCHEDULE
SEPTEMBER 19, 2016

	MCCARTHY	SCHUTTER	DOUVILLE	MERCER
9:30 a.m.	Chevrolet Caprice 3.6L RWD	Dodge Charger 3.6L 2.62 RWD	Ford P.I. Sedan 3.7L AWD	Ford P.I. Sedan 3.5L FWD
9:50 a.m.	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD		Ford SSP Sedan 2.0L Ecoboost FWD
10:10 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 3.5L Ecoboost AWD
10:30 a.m.			Ford P.I. Utility 3.5L Ecoboost AWD	Ford P.I. Utility 3.7L AWD
10:50 a.m.	Ford P.I. Sedan 3.5L FWD	Chevrolet Caprice 3.6L RWD	Dodge Charger 3.6L 2.62 RWD	Ford P.I. Sedan 3.7L AWD
11:10 a.m.	Ford SSP Sedan 2.0L Ecoboost FWD	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD	
11:30 a.m.	Ford P.I. Sedan 3.5L Ecoboost AWD	Chevrolet Caprice 6.0L RWD	Dodge Charger 5.7L 3.08 AWD	Dodge Charger 5.7L 2.62 RWD
11:50 a.m.	Ford P.I. Utility 3.7L AWD			Ford P.I. Utility 3.5L Ecoboost AWD
LUNCH BREAK				
12:50 p.m.	Ford P.I. Sedan 3.7L AWD	Ford P.I. Sedan 3.5L FWD	Chevrolet Caprice 3.6L RWD	Dodge Charger 3.6L 2.62 RWD
1:10 p.m.		Ford SSP Sedan 2.0L Ecoboost FWD	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD
1:30 p.m.	Dodge Charger 5.7L 2.62 RWD	Ford P.I. Sedan 3.5L Ecoboost AWD	Chevrolet Caprice 6.0L RWD	Dodge Charger 5.7L 3.08 AWD
1:50 p.m.	Ford P.I. Utility 3.5L Ecoboost AWD	Ford P.I. Utility 3.7L AWD		
2:10 p.m.	Dodge Charger 3.6L 2.62 RWD	Ford P.I. Sedan 3.7L AWD	Ford P.I. Sedan 3.5L FWD	Chevrolet Caprice 3.6L RWD
2:30 p.m.	Chevrolet Tahoe 5.3L 4WD		Ford SSP Sedan 2.0L Ecoboost FWD	Chevrolet Tahoe 5.3L RWD
2:50 p.m.	Dodge Charger 5.7L 3.08 AWD	Dodge Charger 5.7L 2.62 RWD	Ford P.I. Sedan 3.5L Ecoboost AWD	Chevrolet Caprice 6.0L RWD
3:10 p.m.		Ford P.I. Utility 3.5L Ecoboost AWD	Ford P.I. Utility 3.7L AWD	

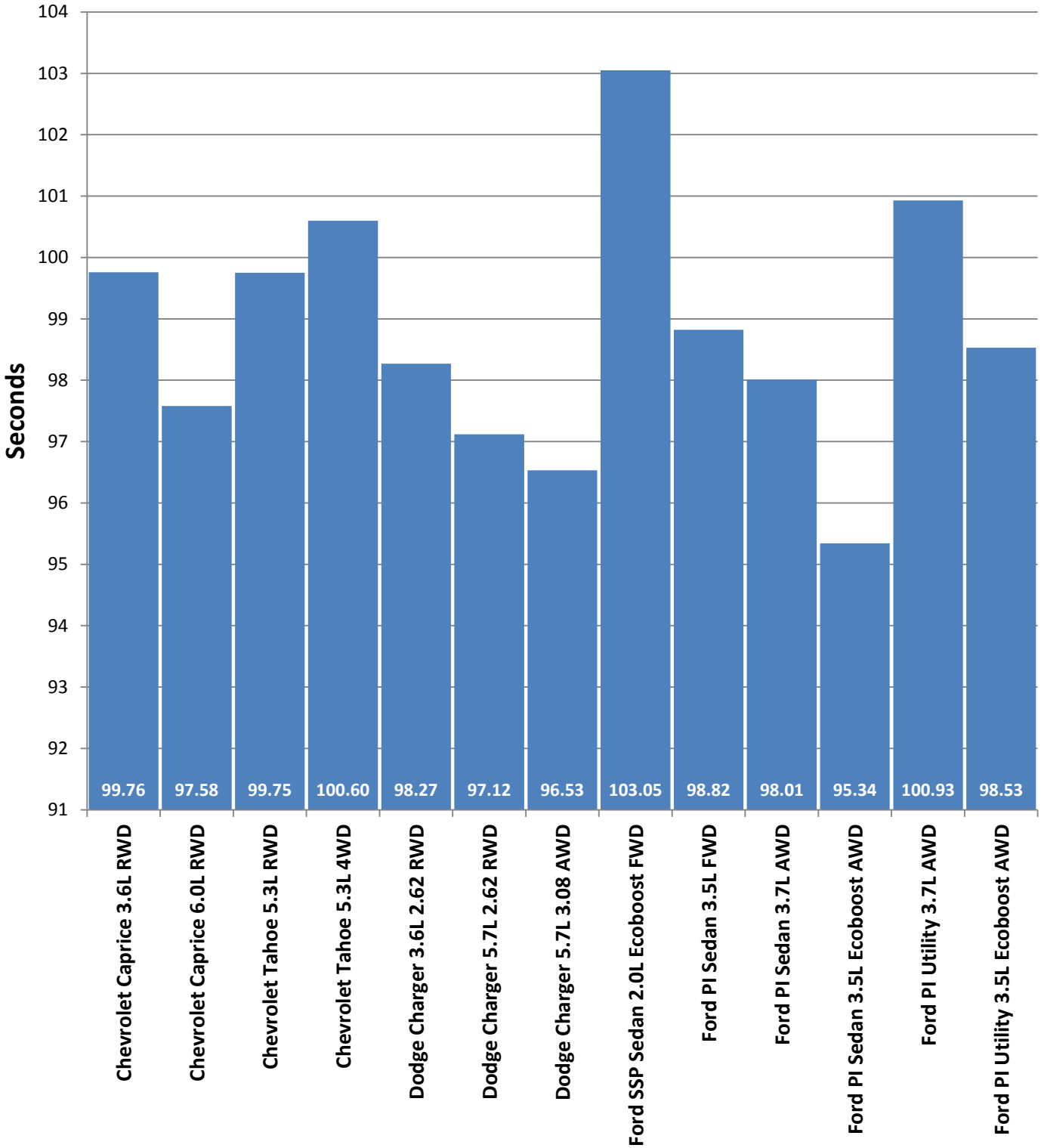
VEHICLE DYNAMICS TESTING ON SEPTEMBER 19, 2016

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
Chevrolet Caprice 3.6L RWD	DOUVILLE	01:40.79	01:41.30	01:41.31	01:41.33	01:41.39	01:41.22
	MCCARTHY	01:38.74	01:38.75	01:38.95	01:38.96	01:39.26	01:38.93
	MERCER	01:39.51	01:39.61	01:39.78	01:39.86	01:39.97	01:39.75
	SCHUTTER	01:38.66	01:39.10	01:39.11	01:39.32	01:39.55	01:39.15
Overall Average							**01:39.76**
Chevrolet Caprice 6.0L RWD	DOUVILLE	01:38.57	01:38.64	01:38.96	01:39.02	01:39.06	01:38.85
	MCCARTHY	01:36.16	01:36.20	01:36.40	01:36.47	01:36.63	01:36.37
	MERCER	01:37.19	01:37.22	01:37.50	01:37.53	01:37.67	01:37.42
	SCHUTTER	01:37.13	01:37.76	01:37.79	01:37.86	01:37.88	01:37.68
Overall Average							**01:37.58**
Chevrolet Tahoe 5.3L RWD	DOUVILLE	01:40.30	01:40.31	01:40.81	01:40.87	01:40.94	01:40.65
	MCCARTHY	01:39.28	01:39.29	01:39.30	01:39.41	01:39.85	01:39.43
	MERCER	01:39.39	01:39.48	01:39.57	01:39.57	01:39.64	01:39.53
	SCHUTTER	01:39.11	01:39.34	01:39.36	01:39.44	01:39.75	01:39.40
Overall Average							**01:39.75**
Chevrolet Tahoe 5.3L 4WD	DOUVILLE	01:40.61	01:41.05	01:41.08	01:41.21	01:41.27	01:41.04
	MCCARTHY	01:39.88	01:40.04	01:40.14	01:40.19	01:40.62	01:40.17
	MERCER	01:40.05	01:40.60	01:40.61	01:40.64	01:40.69	01:40.52
	SCHUTTER	01:40.49	01:40.50	01:40.67	01:40.85	01:40.88	01:40.68
Overall Average							**01:40.60**
Dodge Charger 3.6L 2.62 RWD	DOUVILLE	01:39.16	01:39.24	01:39.76	01:39.79	01:39.93	01:39.58
	MCCARTHY	01:37.44	01:37.91	01:37.92	01:38.05	01:38.13	01:37.89
	MERCER	01:37.38	01:37.58	01:37.79	01:37.80	01:37.97	01:37.70
	SCHUTTER	01:37.35	01:37.74	01:37.75	01:38.29	01:38.30	01:37.89
Overall Average							**01:38.27**
Dodge Charger 5.7L 2.62 RWD	DOUVILLE	01:37.00	01:37.18	01:37.65	01:37.68	01:37.71	01:37.44
	MCCARTHY	01:36.55	01:36.66	01:36.85	01:36.92	01:37.20	01:36.84
	MERCER	01:36.49	01:36.58	01:36.64	01:36.67	01:36.70	01:36.62
	SCHUTTER	01:37.29	01:37.46	01:37.48	01:37.84	01:37.85	01:37.58
Overall Average							**01:37.12**
Dodge Charger 5.7L 3.08 AWD	DOUVILLE	01:36.84	01:37.16	01:37.24	01:37.29	01:37.38	01:37.18
	MCCARTHY	01:36.23	01:36.32	01:36.42	01:36.51	01:36.52	01:36.40
	MERCER	01:35.94	01:36.16	01:36.26	01:36.30	01:36.37	01:36.21
	SCHUTTER	01:36.20	01:36.26	01:36.33	01:36.44	01:36.45	01:36.34
Overall Average							**01:36.53**

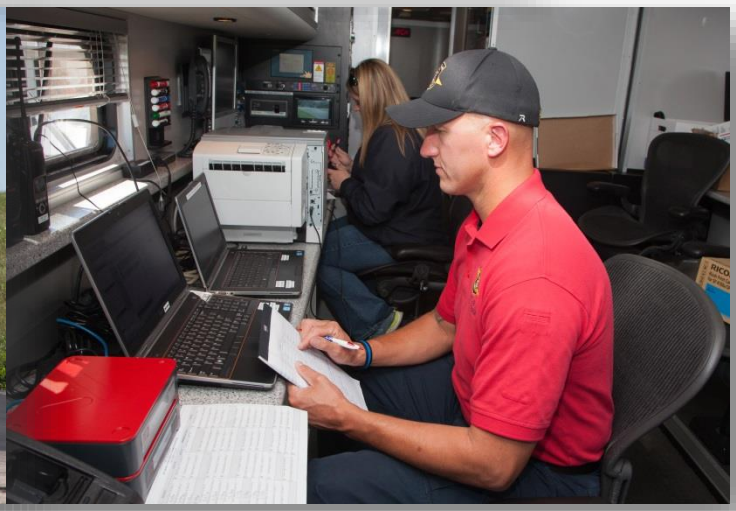
VEHICLE DYNAMICS TESTING ON SEPTEMBER 19, 2016

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
Ford SSP Sedan 2.0L Ecoboost FWD	DOUVILLE	01:42.34	01:44.08	01:45.31	01:45.82	01:45.84	01:44.68
	MCCARTHY	01:40.49	01:41.42	01:42.56	01:42.87	01:43.87	01:42.24
	MERCER	01:41.04	01:41.73	01:41.92	01:42.31	01:42.39	01:41.88
	SCHUTTER	01:41.61	01:41.79	01:43.40	01:44.67	01:45.52	01:43.40
Overall Average							**01:43.05**
Ford PI Sedan 3.5L FWD	DOUVILLE	01:39.16	01:39.29	01:39.53	01:39.78	01:39.90	01:39.53
	MCCARTHY	01:38.36	01:38.49	01:38.60	01:38.66	01:38.68	01:38.56
	MERCER	01:38.26	01:38.33	01:38.47	01:38.54	01:38.62	01:38.44
	SCHUTTER	01:38.37	01:38.67	01:38.83	01:38.90	01:38.96	01:38.75
Overall Average							**01:38.82**
Ford PI Sedan 3.7L AWD	DOUVILLE	01:38.64	01:38.68	01:38.75	01:39.02	01:39.06	01:38.83
	MCCARTHY	01:37.56	01:37.60	01:37.80	01:37.83	01:37.88	01:37.73
	MERCER	01:37.41	01:37.55	01:37.57	01:37.57	01:37.79	01:37.58
	SCHUTTER	01:37.66	01:37.82	01:37.89	01:38.00	01:38.19	01:37.91
Overall Average							**01:38.01**
Ford PI Sedan 3.5L Ecoboost AWD	DOUVILLE	01:35.63	01:35.87	01:36.10	01:36.74	01:36.81	01:36.23
	MCCARTHY	01:34.62	01:34.70	01:34.71	01:34.87	01:35.16	01:34.81
	MERCER	01:35.17	01:35.20	01:35.31	01:35.36	01:35.44	01:35.30
	SCHUTTER	01:34.59	01:34.91	01:34.93	01:35.13	01:35.49	01:35.01
Overall Average							**01:35.34**
Ford PI Utility 3.7L AWD	DOUVILLE	01:41.06	01:41.33	01:41.52	01:41.65	01:41.69	01:41.45
	MCCARTHY	01:40.33	01:40.39	01:40.63	01:40.65	01:40.71	01:40.54
	MERCER	01:41.01	01:41.15	01:41.18	01:41.21	01:41.25	01:41.16
	SCHUTTER	01:40.51	01:40.51	01:40.53	01:40.60	01:40.64	01:40.56
Overall Average							**01:40.93**
Ford PI Utility 3.5L Ecoboost AWD	DOUVILLE	01:39.12	01:39.43	01:39.66	01:39.74	01:39.78	01:39.55
	MCCARTHY	01:37.97	01:38.01	01:38.09	01:38.21	01:38.27	01:38.11
	MERCER	01:37.89	01:38.01	01:38.20	01:38.55	01:38.56	01:38.24
	SCHUTTER	01:37.92	01:37.97	01:38.33	01:38.36	01:38.42	01:38.20
Overall Average							**01:38.53**

2017 Model Year
Vehicle Dynamics



Grattan
RACEWAY



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

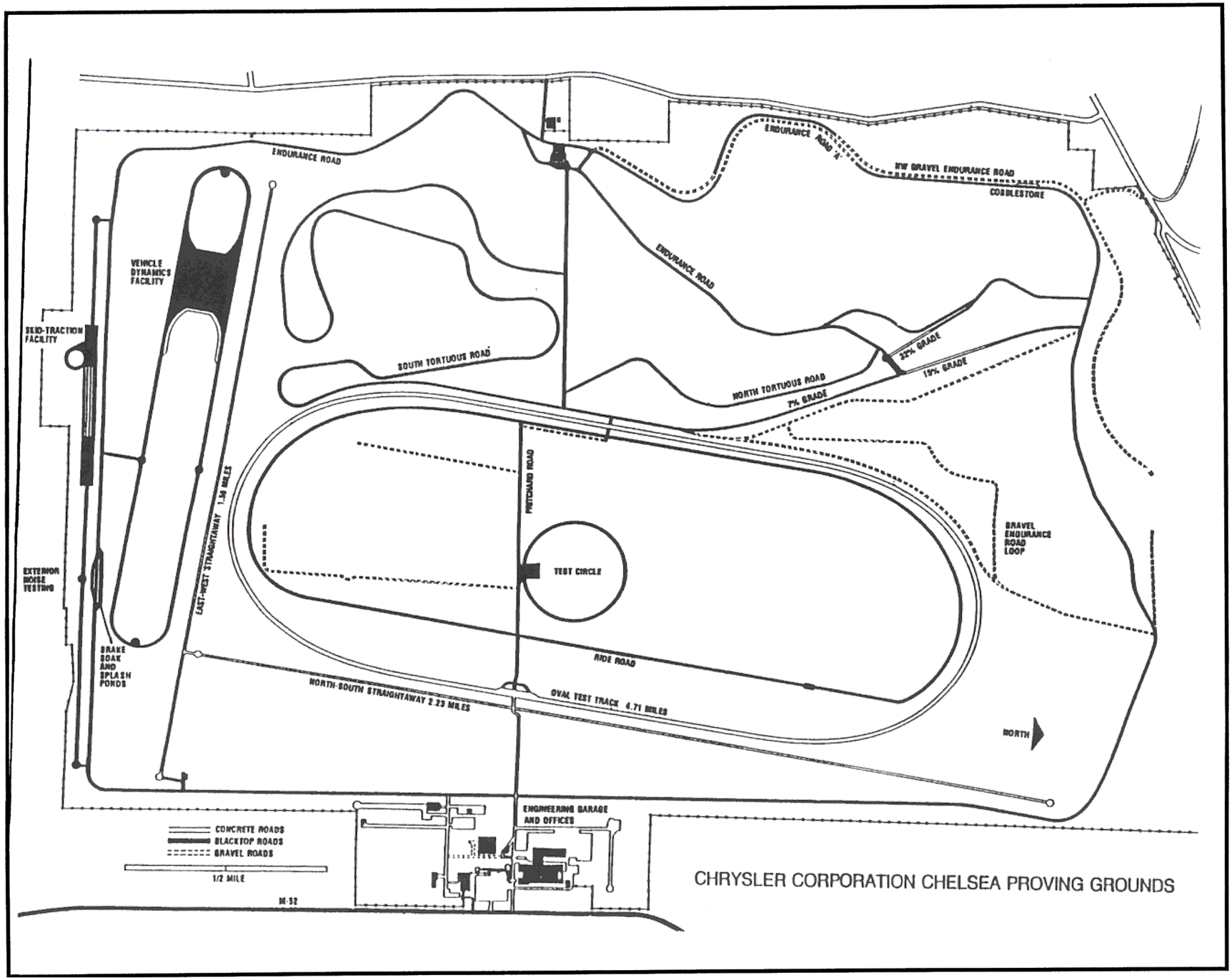
Using a Race Logic Vbox 3i GPS based data collection unit, each vehicle is driven through four acceleration sequences, two northbound and two southbound, to allow for wind direction. The four resulting times for each target speed are averaged and the average times are used to derive scores for acceleration.

TOP SPEED TESTING OBJECTIVE

To verify the electronically limited top speed reported by the manufacturer 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.


ENDURANCE ROAD
ENDURANCE ROAD
NW GRAVEL ENDURANCE ROAD
COBBLESTONE
VEHICLE DYNAMICS FACILITY
SKID-TRACTION FACILITY
ENDURANCE ROAD
SOUTH TORTUOUS ROAD
NORTH TORTUOUS ROAD
32% GRADE
19% GRADE
7% GRADE
PRITCHARD ROAD
EAST-WEST STRAIGHTAWAY 1.50 MILES
TEST CIRCLE
GRAVEL ENDURANCE ROAD LOOP
EXTERIOR NOISE TESTING
BRAKE SOAK AND SPLASH PONDS
RIDE ROAD
NORTH-SOUTH STRAIGHTAWAY 2.23 MILES
OVAL TEST TRACK 4.71 MILES
NORTH
ENGINEERING GARAGE AND OFFICES
CONCRETE ROADS
BLACKTOP ROADS
GRAVEL ROADS
1/2 MILE
M-52
CHRYSLER CORPORATION CHELSEA PROVING GROUNDS

TEST LOCATION: FCA Proving Grounds **DATE:** September 17, 2016

Chevrolet Caprice 3.6L RWD

BEGINNING TIME: 6:22 p.m. **TEMPERATURE:** 74.0° F
WIND VELOCITY: 3.8 mph **WIND DIRECTION:** 216°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.88	7.95	7.89	7.90	**7.91 seconds**
0 – 80	12.62	12.37	12.56	12.40	**12.49 seconds**
0 – 100	19.47	19.23	19.35	19.10	**19.29 seconds**

DISTANCE TO REACH 100 MPH: 0.33 mile
DISTANCE TO REACH 120 MPH: 0.70 mile

TOP SPEED ATTAINED: 147 mph

DISTANCE TO REACH TOP SPEED: 9.91 miles
TIME TO REACH TOP SPEED: 263.65 seconds

Chevrolet Caprice 6.0L RWD

BEGINNING TIME: 5:41 p.m. **TEMPERATURE:** 74.7° F
WIND VELOCITY: 4.7 mph **WIND DIRECTION:** 184°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.30	6.06	6.05	6.03	**6.11 seconds**
0 – 80	10.06	9.68	9.73	9.67	**9.79 seconds**
0 – 100	14.77	14.25	14.34	14.25	**14.40 seconds**

DISTANCE TO REACH 100 MPH: 0.24 mile
DISTANCE TO REACH 120 MPH: 0.46 mile

TOP SPEED ATTAINED: 155 mph

DISTANCE TO REACH TOP SPEED: 3.21 miles
TIME TO REACH TOP SPEED: 89.03 seconds

Chevrolet Tahoe 5.3L RWD

BEGINNING TIME: 3:41 p.m. **TEMPERATURE:** 71.9° F
WIND VELOCITY: 4.2 mph **WIND DIRECTION:** 240°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.94	7.85	8.05	8.03	**7.97 seconds**
0 – 80	13.02	12.73	13.45	13.38	**13.15 seconds**
0 – 100	19.73	19.16	20.23	19.93	**19.76 seconds**

DISTANCE TO REACH 100 MPH: 0.34 mile
DISTANCE TO REACH 120 MPH: 0.73 mile

TOP SPEED ATTAINED: 132 mph

DISTANCE TO REACH TOP SPEED: 1.30 miles
TIME TO REACH TOP SPEED: 48.78 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 17, 2016

Chevrolet Tahoe 5.3L 4WD

BEGINNING TIME: 4:19 p.m. **TEMPERATURE:** 73.9° F
WIND VELOCITY: 9.3 mph **WIND DIRECTION:** 254°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.96	8.00	8.15	8.19	**8.08 seconds**
0 – 80	13.27	12.80	13.48	13.62	**13.29 seconds**
0 – 100	20.19	20.11	20.57	20.70	**20.39 seconds**

DISTANCE TO REACH 100 MPH: 0.36 mile
DISTANCE TO REACH 120 MPH: 0.77 mile

TOP SPEED ATTAINED: 121 mph

DISTANCE TO REACH TOP SPEED: .88 miles
TIME TO REACH TOP SPEED: 37.23 seconds

Dodge Charger 3.6L 2.62 RWD

BEGINNING TIME: 6:42 p.m. **TEMPERATURE:** 74.3° F
WIND VELOCITY: 1.5 mph **WIND DIRECTION:** 258°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.19	8.04	8.07	7.93	**8.06 seconds**
0 – 80	13.05	12.68	12.85	12.63	**12.80 seconds**
0 – 100	20.61	20.19	20.25	19.85	**20.23 seconds**

DISTANCE TO REACH 100 MPH: 0.35 mile
DISTANCE TO REACH 120 MPH: 0.70 mile

TOP SPEED ATTAINED: 141 mph

DISTANCE TO REACH TOP SPEED: 1.66 miles
TIME TO REACH TOP SPEED: 57.33 seconds

Dodge Charger 5.7L 2.62 RWD

BEGINNING TIME: 5:56 p.m. **TEMPERATURE:** 74.8° F
WIND VELOCITY: 8.2 mph **WIND DIRECTION:** 231°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.27	6.14	6.15	6.13	**6.17 seconds**
0 – 80	9.58	9.43	9.45	9.36	**9.46 seconds**
0 – 100	15.48	15.19	15.17	15.03	**15.22 seconds**

DISTANCE TO REACH 100 MPH: 0.26 mile
DISTANCE TO REACH 120 MPH: 0.46 mile

TOP SPEED ATTAINED: 149 mph

DISTANCE TO REACH TOP SPEED: 1.45 miles
TIME TO REACH TOP SPEED: 47.33 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 17, 2016

Dodge Charger 5.7L 3.08 AWD

BEGINNING TIME: 4:48 p.m. **TEMPERATURE:** 73.5° F
WIND VELOCITY: 6.5 mph **WIND DIRECTION:** 247°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.25	6.03	6.00	5.92	**6.05 seconds**
0 – 80	10.34	9.96	9.90	9.79	**10.00 seconds**
0 – 100	15.56	15.22	15.28	14.96	**15.26 seconds**

DISTANCE TO REACH 100 MPH: 0.26 mile
DISTANCE TO REACH 120 MPH: 0.51 mile

TOP SPEED ATTAINED: 149 mph

DISTANCE TO REACH TOP SPEED: 1.42 miles
TIME TO REACH TOP SPEED: 46.81 seconds

Ford SSP Sedan 2.0L Ecoboost FWD

BEGINNING TIME: 3:20 p.m. **TEMPERATURE:** 71.4° F
WIND VELOCITY: 5.1 mph **WIND DIRECTION:** 208°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.21	8.19	8.35	8.27	**8.26 seconds**
0 – 80	13.34	13.11	13.85	13.72	**13.51 seconds**
0 – 100	21.33	21.45	23.26	22.65	**22.17 seconds**

DISTANCE TO REACH 100 MPH: 0.41 mile
DISTANCE TO REACH 120 MPH: 1.03 mile

TOP SPEED ATTAINED: 120 mph

DISTANCE TO REACH TOP SPEED: 1.03 miles
TIME TO REACH TOP SPEED: 42.45 seconds

Ford P.I. Sedan 3.5L FWD

BEGINNING TIME: 3:04 p.m. **TEMPERATURE:** 71.4° F
WIND VELOCITY: 4.4 mph **WIND DIRECTION:** 255°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.85	7.85	7.74	7.68	**7.78 seconds**
0 – 80	12.85	12.92	12.62	12.63	**12.76 seconds**
0 – 100	20.20	19.46	19.77	19.38	**19.70 seconds**

DISTANCE TO REACH 100 MPH: 0.34 mile
DISTANCE TO REACH 120 MPH: 0.72 mile

TOP SPEED ATTAINED: 131 mph

DISTANCE TO REACH TOP SPEED: 1.67 miles
TIME TO REACH TOP SPEED: 58.48 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 17, 2016

Ford P.I. Sedan 3.7L AWD

BEGINNING TIME: 6:11 p.m. **TEMPERATURE:** 73.5° F
WIND VELOCITY: 5.5 mph **WIND DIRECTION:** 234°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	7.42	7.36	7.47	7.47	**7.43 seconds**
0 – 80	11.89	11.75	11.98	11.94	**11.89 seconds**
0 – 100	18.62	18.12	18.89	18.62	**18.56 seconds**

DISTANCE TO REACH 100 MPH: 0.33 mile
DISTANCE TO REACH 120 MPH: 0.73 mile

TOP SPEED ATTAINED: 131 mph

DISTANCE TO REACH TOP SPEED: 1.20 miles
TIME TO REACH TOP SPEED: 45.13 seconds

Ford P.I. Sedan 3.5L Ecoboost AWD

BEGINNING TIME: 5:15 p.m. **TEMPERATURE:** 73.8° F
WIND VELOCITY: 3.7 mph **WIND DIRECTION:** 220°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	5.61	5.70	5.73	5.75	**5.70 seconds**
0 – 80	8.87	8.95	9.03	9.06	**8.98 seconds**
0 – 100	13.44	13.55	13.78	13.70	**13.62 seconds**

DISTANCE TO REACH 100 MPH: 0.24 mile
DISTANCE TO REACH 120 MPH: 0.46 mile

TOP SPEED ATTAINED: 148 mph

DISTANCE TO REACH TOP SPEED: 1.23 miles
TIME TO REACH TOP SPEED: 41.24 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 17, 2016

Ford P.I. Utility 3.7L AWD

BEGINNING TIME: 4:33 p.m. **TEMPERATURE:** 74.0° F
WIND VELOCITY: 7.7 mph **WIND DIRECTION:** 276°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	8.04	7.93	8.01	7.97	**7.99 seconds**
0 – 80	12.88	12.84	12.82	12.75	**12.82 seconds**
0 – 100	20.95	20.20	21.16	20.20	**20.63 seconds**

DISTANCE TO REACH 100 MPH: 0.36 mile
DISTANCE TO REACH 120 MPH: 0.95 mile

TOP SPEED ATTAINED: 131 mph

DISTANCE TO REACH TOP SPEED: 2.23 miles
TIME TO REACH TOP SPEED: 75.58 seconds

Ford P.I. Utility 3.5L Ecoboost AWD

BEGINNING TIME: 4:13 p.m. **TEMPERATURE:** 73.4° F
WIND VELOCITY: 9.5 mph **WIND DIRECTION:** 240°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	6.32	6.39	6.44	6.45	**6.40 seconds**
0 – 80	10.24	10.28	10.39	10.47	**10.35 seconds**
0 – 100	15.89	15.78	16.18	16.14	**16.00 seconds**

DISTANCE TO REACH 100 MPH: 0.28 mile
DISTANCE TO REACH 120 MPH: 0.60 mile

TOP SPEED ATTAINED: 131 mph

DISTANCE TO REACH TOP SPEED: 0.92 miles
TIME TO REACH TOP SPEED: 35.46 seconds

SUMMARY OF ACCELERATION AND TOP SPEED

CHEVROLET VEHICLES

	Chevrolet Caprice 3.6L RWD	Chevrolet Caprice 6.0L RWD	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD
ACCELERATION				
0 – 20 mph (seconds)	2.00	1.64	2.25	2.18
0 – 30 mph (seconds)	3.13	2.52	3.31	3.25
0 – 40 mph (seconds)	4.31	3.57	4.63	4.61
0 – 50 mph (seconds)	6.07	4.78	6.24	6.28
0 – 60 mph (seconds)	7.91	6.11	7.97	8.08
0 – 70 mph (seconds)	9.79	7.82	10.42	10.59
0 – 80 mph (seconds)	12.49	9.79	13.15	13.29
0 – 90 mph (seconds)	15.84	11.82	16.20	16.65
0 – 100 mph (seconds)	19.29	14.40	19.76	20.39
TOP SPEED (mph)	147	155	132	121
DISTANCE TO REACH				
100 mph (miles)	0.34	0.24	0.34	0.36
120 mph (miles)	0.73	0.46	0.73	0.77
Top Speed (miles)	9.91	3.21	1.30	0.88
QUARTER MILE				
Time (seconds)	16.06	14.58	16.35	16.42
Speed (mph)	90.68	100.61	90.46	89.34

SUMMARY OF ACCELERATION AND TOP SPEED

DODGE VEHICLES

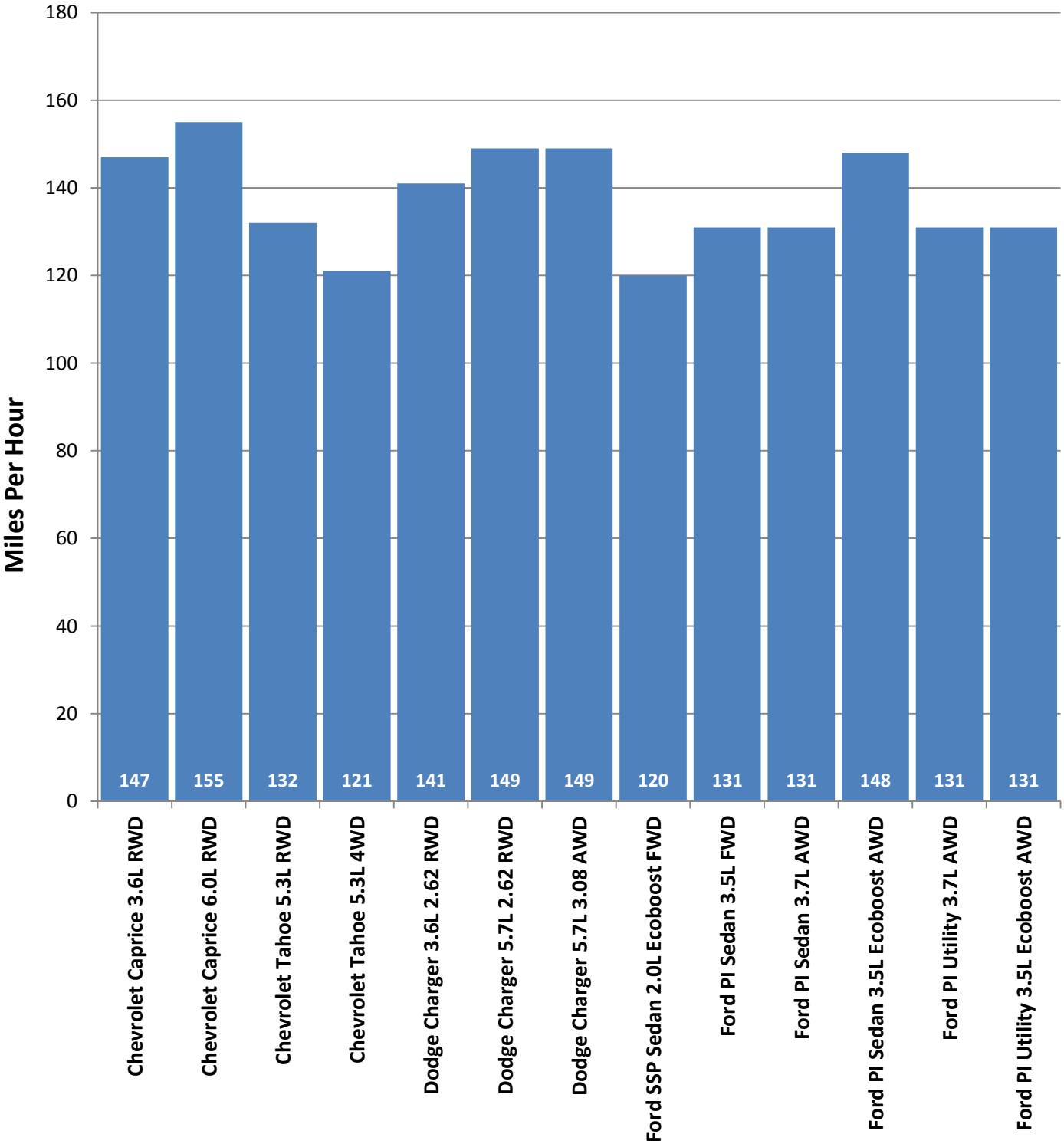
	Dodge Charger 3.6L 2.62 RWD	Dodge Charger 5.7L 2.62 RWD	Dodge Charger 5.7L 3.08 AWD
ACCELERATION			
0 – 20 mph (seconds)	1.99	1.57	1.42
0 – 30 mph (seconds)	3.41	2.55	2.35
0 – 40 mph (seconds)	4.80	3.51	3.31
0 – 50 mph (seconds)	6.22	4.68	4.67
0 – 60 mph (seconds)	8.06	6.17	6.05
0 – 70 mph (seconds)	10.38	7.68	7.72
0 – 80 mph (seconds)	12.80	9.46	10.00
0 – 90 mph (seconds)	15.57	12.31	12.51
0 – 100 mph (seconds)	20.23	15.22	15.26
TOP SPEED (mph)	141	149	149
DISTANCE TO REACH			
100 mph (miles)	0.35	0.26	0.26
120 mph (miles)	0.70	0.46	0.51
Top Speed (miles)	1.66	1.45	1.42
QUARTER MILE			
Time (seconds)	16.23	14.61	14.60
Speed (mph)	91.87	97.93	97.69

SUMMARY OF ACCELERATION AND TOP SPEED

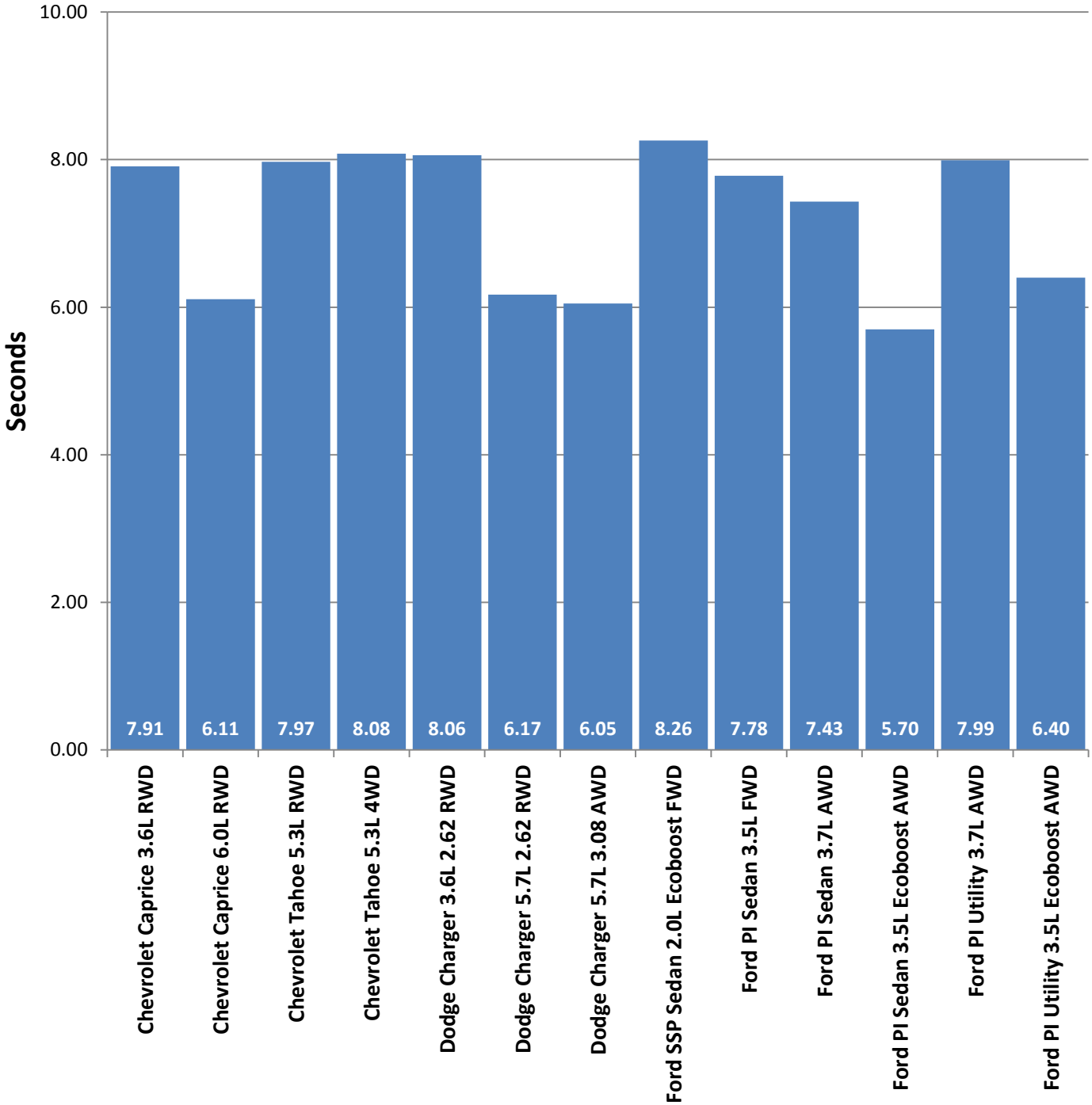
FORD VEHICLES

	Ford SSP Sedan 2.0L Ecoboost FWD	Ford PI Sedan 3.5L FWD	Ford PI Sedan 3.7L AWD	Ford PI Sedan 3.5L Ecoboost AWD	Ford PI Utility 3.7L AWD	Ford PI Utility 3.5L Ecoboost AWD
ACCELERATION						
0 – 20 mph (seconds)	2.05	2.01	1.76	1.51	1.82	1.60
0 – 30 mph (seconds)	3.03	3.03	2.73	2.25	2.82	2.45
0 – 40 mph (seconds)	4.46	4.34	4.04	3.14	4.23	3.46
0 – 50 mph (seconds)	6.08	5.86	5.45	4.20	5.80	4.67
0 – 60 mph (seconds)	8.26	7.78	7.43	5.70	7.99	6.40
0 – 70 mph (seconds)	10.60	10.19	9.58	7.27	10.20	8.28
0 – 80 mph (seconds)	13.51	12.76	11.89	8.98	12.82	10.35
0 – 90 mph (seconds)	17.40	15.58	14.86	11.19	16.30	13.00
0 – 100 mph (seconds)	22.17	19.70	18.56	13.62	20.63	16.00
TOP SPEED (mph)	120	131	131	148	131	131
DISTANCE TO REACH						
100 mph (miles)	0.41	0.34	0.33	0.24	0.36	0.28
120 mph (miles)	1.03	0.72	0.73	0.46	0.95	0.60
Top Speed (miles)	1.03	1.66	1.20	1.23	2.23	0.92
QUARTER MILE						
Time (seconds)	16.39	16.03	15.63	14.17	16.05	14.86
Speed (mph)	87.38	91.38	92.25	101.95	89.37	96.41

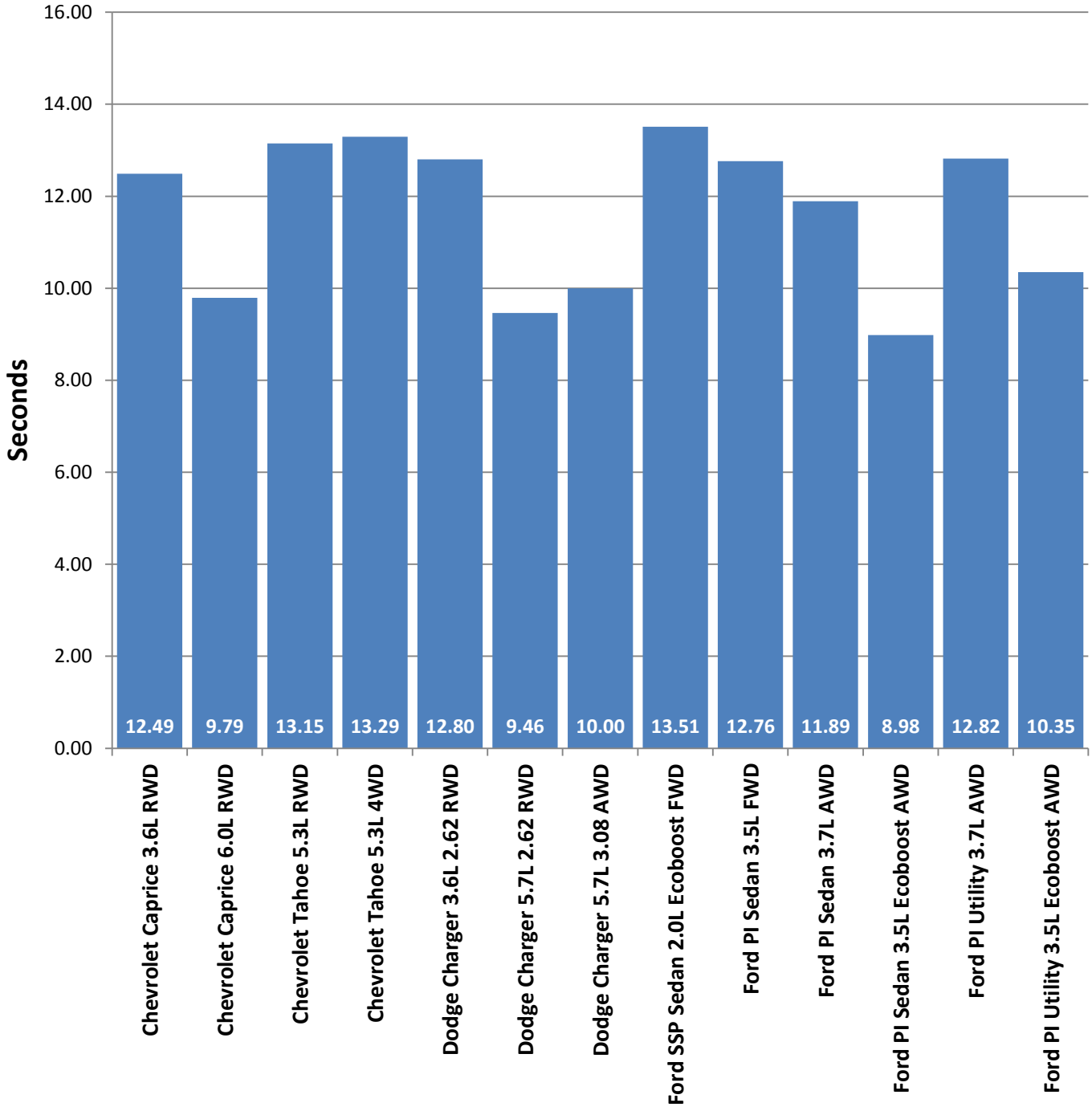
2017 Model Year
Top Speed Comparison
Top Speed Attained



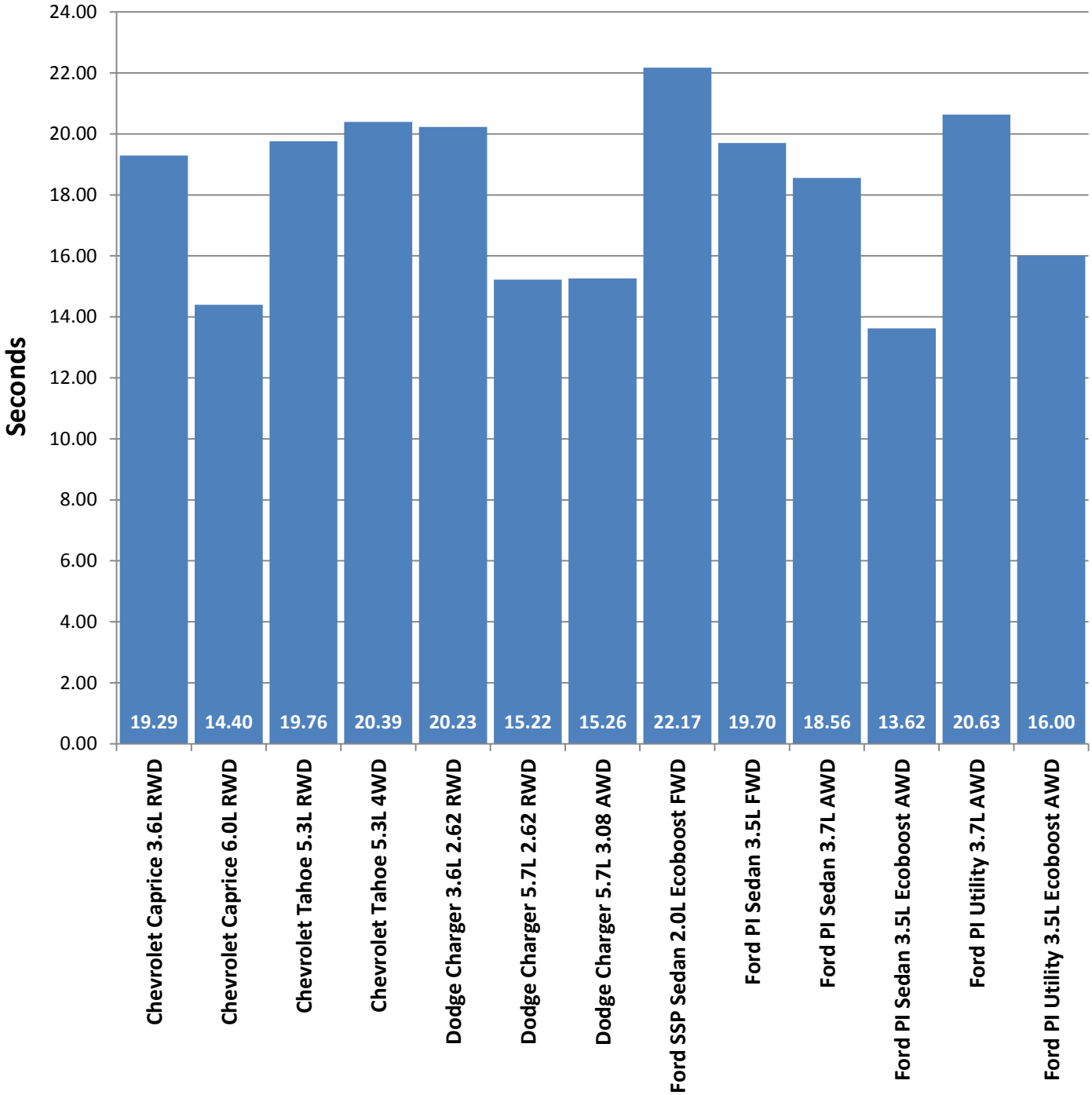
2017 Model Year
Acceleration Comparison
Acceleration Times
0-60 mph



2017 Model Year
Acceleration Comparison
Acceleration Times
0-80 mph



2017 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.

11

BRAKE TESTING

Chevrolet Caprice 3.6L RWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 17, 2016
BEGINNING TIME: 5:28 p.m.	**TEMPERATURE:** 74.5° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.91	125.81	30.69
2	59.38	122.58	30.94
3	59.93	129.20	29.90
4	59.81	127.34	30.22
5	59.83	128.15	30.04
6	60.06	128.11	30.29
7	60.04	131.43	29.50
8	60.10	126.51	30.71
9	59.88	124.96	30.86
10	59.99	128.89	30.03
AVERAGE DECELERATION RATE:			**30.32 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	60.08	128.92	30.12
2	59.80	125.55	30.64
3	60.33	128.72	30.41
4	60.16	126.62	30.74
5	59.95	126.99	30.44
6	59.78	125.36	30.66
7	59.63	126.45	30.25
8	59.60	125.56	30.43
9	59.82	124.76	30.85
10	59.67	127.95	29.93
AVERAGE DECELERATION RATE:			**30.45 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.39 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**127.4 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 Caprice 6.0L RWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 17, 2016
BEGINNING TIME: 4:20 p.m.	**TEMPERATURE:** 73.8° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.98	126.56	30.58
2	60.49	127.71	30.82
3	60.33	132.54	29.54
4	60.11	129.99	29.90
5	60.22	129.21	30.19
6	59.80	127.12	30.26
7	60.15	127.49	30.52
8	60.01	126.80	30.55
9	60.11	126.12	30.81
10	60.06	129.04	30.07
AVERAGE DECELERATION RATE:			**30.32 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	59.99	124.87	31.00
2	60.10	125.61	30.93
3	59.81	126.68	30.37
4	59.79	126.66	30.36
5	59.71	124.77	30.74
6	60.06	127.34	30.47
7	60.22	128.11	30.45
8	59.96	126.30	30.62
9	60.32	126.99	30.82
10	60.04	127.36	30.44
AVERAGE DECELERATION RATE:			**30.62 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.47 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**127.1 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 17, 2016
BEGINNING TIME: 6:54 p.m.	**TEMPERATURE:** 73.3° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.16	140.71	27.67
2	59.96	133.88	28.88
3	59.94	136.32	28.35
4	59.94	137.51	28.10
5	60.08	139.72	27.79
6	59.91	134.38	28.73
7	60.23	138.50	28.17
8	60.17	140.05	27.81
9	60.11	138.33	28.10
10	59.93	139.62	27.67
AVERAGE DECELERATION RATE:			**28.13 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	60.16	135.95	28.63
2	60.00	134.08	28.88
3	60.14	142.29	27.34
4	60.50	141.75	27.77
5	60.81	140.15	28.38
6	59.93	137.95	28.00
7	59.95	137.49	28.12
8	59.86	136.22	28.29
9	59.80	137.02	28.07
10	59.86	140.20	27.49
AVERAGE DECELERATION RATE:			**28.10 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.12 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**137.7 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

Chevrolet Tahoe 5.3L 4WD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 17, 2016
BEGINNING TIME: 7:12 p.m.	**TEMPERATURE:** 72.2° 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	134.33	28.76
2	59.83	135.45	28.43
3	60.44	136.93	28.69
4	60.06	136.74	28.37
5	60.18	135.91	28.66
6	59.93	133.77	28.88
7	59.99	133.94	28.90
8	60.19	136.25	28.60
9	60.52	137.70	28.61
10	60.19	136.57	28.53
AVERAGE DECELERATION RATE:			**28.64 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	59.96	135.71	28.49
2	60.50	140.95	27.93
3	59.75	133.22	28.82
4	60.18	138.54	28.12
5	60.72	138.70	28.59
6	60.01	136.70	28.34
7	60.03	132.48	29.26
8	60.09	135.68	28.62
9	60.49	135.91	28.96
10	60.41	136.60	28.74
AVERAGE DECELERATION RATE:			**28.59 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.62 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**135.3 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 17, 2016
BEGINNING TIME: 5:51 p.m.	**TEMPERATURE:** 74.7° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.73	126.20	30.41
2	60.03	125.32	30.93
3	59.95	124.52	31.05
4	59.38	120.75	31.41
5	59.73	123.87	30.98
6	59.74	123.33	31.13
7	59.77	126.78	30.31
8	59.83	126.52	30.43
9	59.64	121.92	31.38
10	59.86	121.75	31.66
AVERAGE DECELERATION RATE:			**30.97 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	59.99	125.57	30.83
2	59.88	124.33	31.02
3	59.90	125.76	30.69
4	59.63	123.05	31.08
5	59.82	125.02	30.79
6	59.95	124.28	31.10
7	59.85	126.86	30.37
8	60.04	124.67	31.10
9	59.90	123.83	31.17
10	60.00	124.56	31.09
AVERAGE DECELERATION RATE:			**30.92 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.95 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**125.1 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 17, 2016
BEGINNING TIME: 7:33 p.m.	**TEMPERATURE:** 71.3° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.10	125.37	30.99
2	60.01	121.58	31.86
3	60.40	125.61	31.24
4	59.55	120.60	31.63
5	60.28	123.17	31.73
6	60.09	122.60	31.68
7	60.07	123.03	31.55
8	60.15	123.30	31.56
9	59.92	121.61	31.76
10	59.91	123.32	31.31
AVERAGE DECELERATION RATE:			**31.53 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	60.10	124.82	31.13
2	60.02	123.97	31.26
3	60.42	126.20	31.11
4	60.55	124.12	31.77
5	60.18	122.58	31.78
6	60.24	125.89	31.00
7	60.37	126.83	30.91
8	60.18	123.17	31.63
9	59.86	121.90	31.62
10	60.35	125.64	31.18
AVERAGE DECELERATION RATE:			**31.34 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**31.44 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**123.2 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

Dodge Charger 5.7L 3.08 AWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 17, 2016
BEGINNING TIME: 3:45 p.m.	**TEMPERATURE:** 71.9° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.89	128.48	30.03
2	59.74	124.71	30.78
3	60.11	128.30	30.29
4	59.81	128.58	29.92
5	59.85	123.98	31.08
6	59.82	124.92	30.81
7	59.77	126.83	30.30
8	59.78	123.62	31.09
9	59.61	122.45	31.21
10	60.24	129.62	30.11
AVERAGE DECELERATION RATE:			**30.56 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	60.01	125.07	30.97
2	59.92	124.22	31.09
3	59.80	127.54	30.16
4	60.59	131.77	29.97
5	59.96	128.67	30.05
6	60.03	126.19	30.72
7	**Not recorded due to data collection error		
8	59.86	125.62	30.68
9	60.42	128.68	30.51
10	60.06	129.74	29.91
AVERAGE DECELERATION RATE:			**30.45 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.51 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**126.9 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 SSP Sedan 2.0L Ecoboost FWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 17, 2016
BEGINNING TIME: 6:34 p.m.	**TEMPERATURE:** 74.6° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.39	127.29	30.82
2	60.22	126.78	30.77
3	60.17	130.61	29.82
4	59.92	130.50	29.59
5	60.26	131.96	29.60
6	60.17	128.23	30.37
7	60.05	131.40	29.52
8	60.04	126.92	30.55
9	60.24	129.65	30.11
10	59.91	128.12	30.13
AVERAGE DECELERATION RATE:			**30.13 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	60.18	128.28	30.37
2	60.13	126.63	30.71
3	60.15	131.65	29.56
4	60.11	130.73	29.73
5	60.26	131.77	29.64
6	59.76	126.55	30.35
7	60.20	130.83	29.79
8	60.06	128.09	30.29
9	59.93	130.90	29.51
10	60.02	132.55	29.23
AVERAGE DECELERATION RATE:			**29.92 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.03 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 Sedan 3.5L FWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 17, 2016
BEGINNING TIME: 6:12 p.m.	**TEMPERATURE:** 73.5° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.93	128.90	29.97
2	60.03	126.72	30.59
3	59.86	124.48	30.96
4	60.05	128.70	30.14
5	59.93	127.10	30.39
6	59.84	126.66	30.41
7	60.06	126.84	30.59
8	60.12	127.57	30.47
9	60.25	129.06	30.25
10	60.30	129.05	30.31
AVERAGE DECELERATION RATE:			**30.41 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	123.49	30.90
2	59.90	123.51	31.25
3	60.14	127.19	30.59
4	60.11	127.22	30.55
5	60.16	128.06	30.40
6	60.14	128.03	30.39
7	59.89	129.73	29.74
8	59.89	128.72	29.97
9	60.19	128.82	30.25
10	60.30	127.17	30.75
AVERAGE DECELERATION RATE:			**30.48 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.44 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**127.2 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

Ford Police Interceptor Sedan 3.7L AWD

TEST LOCATION: FCA Proving Grounds	**DATE:** September 17, 2016
BEGINNING TIME: 5:05 p.m.	**TEMPERATURE:** 74.0° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.79	131.39	29.26
2	60.11	133.31	29.15
3	59.85	129.70	29.71
4	60.06	129.46	29.97
5	59.51	127.73	29.82
6	60.22	132.46	29.45
7	59.63	129.17	29.61
8	59.35	128.96	29.38
9	60.22	133.21	29.28
10	59.97	132.07	29.29
AVERAGE DECELERATION RATE:			**29.49 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	59.68	130.23	29.42
2	59.84	129.41	29.76
3	60.39	131.24	29.89
4	59.71	124.79	30.73
5	60.30	133.81	29.23
6	59.59	124.12	30.77
7	59.66	127.88	29.94
8	59.64	126.43	30.26
9	59.72	126.23	30.39
10	59.82	128.95	29.85
AVERAGE DECELERATION RATE:			**30.02 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**29.76 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**130.1 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 17, 2016
BEGINNING TIME: 4:05 p.m.	**TEMPERATURE:** 73.6° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.64	131.00	29.20
2	59.92	131.69	29.33
3	59.98	133.74	28.93
4	60.00	132.40	29.25
5	59.76	133.35	28.81
6	59.68	130.55	29.34
7	59.73	128.19	29.94
8	60.05	129.62	29.92
9	60.09	131.09	29.63
10	59.88	129.39	29.81
AVERAGE DECELERATION RATE:			**29.42 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	59.91	129.06	29.91
2	59.86	129.02	29.87
3	60.04	129.03	30.05
4	59.92	131.21	29.43
5	60.05	131.50	29.50
6	59.86	128.36	30.03
7	59.95	128.29	30.13
8	59.92	129.45	29.83
9	59.82	129.41	29.74
10	59.93	130.64	29.57
AVERAGE DECELERATION RATE:			**29.81 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**29.62 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**130.7 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 17, 2016
BEGINNING TIME: 7:33 p.m.	**TEMPERATURE:** 71.3° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.82	127.15	30.27
2	59.83	126.25	30.50
3	59.93	127.49	30.30
4	59.62	125.99	30.35
5	60.04	126.68	30.61
6	59.78	125.08	30.73
7	59.65	122.71	31.19
8	59.88	125.43	30.75
9	59.76	125.23	30.67
10	60.12	127.23	30.56
AVERAGE DECELERATION RATE:			**30.59 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	59.97	128.52	30.10
2	60.39	127.09	30.87
3	60.01	127.86	30.29
4	60.21	128.70	30.30
5	59.78	125.80	30.56
6	59.83	127.58	30.18
7	59.78	128.71	29.86
8	59.89	127.46	30.27
9	59.75	127.38	30.15
10	59.99	126.48	30.60
AVERAGE DECELERATION RATE:			**30.32 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.46 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**127.1 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 17, 2016
BEGINNING TIME: 7:10 p.m.	**TEMPERATURE:** 72.2° 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	126.12	30.54
2	59.99	127.29	30.41
3	60.08	127.01	30.57
4	60.00	126.22	30.68
5	59.75	123.45	31.11
6	60.09	126.61	30.68
7	59.86	127.86	30.14
8	60.13	127.19	30.58
9	60.00	128.08	30.23
10	59.99	128.50	30.12
AVERAGE DECELERATION RATE:			**30.51 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	128.33	30.04
2	59.94	124.75	30.98
3	60.05	130.67	29.68
4	59.87	129.09	29.87
5	59.93	126.59	30.52
6	60.08	127.65	30.42
7	60.08	132.68	29.26
8	60.10	127.92	30.37
9	59.98	128.23	30.18
10	60.31	130.26	30.03
AVERAGE DECELERATION RATE:			**30.14 ft/s²**

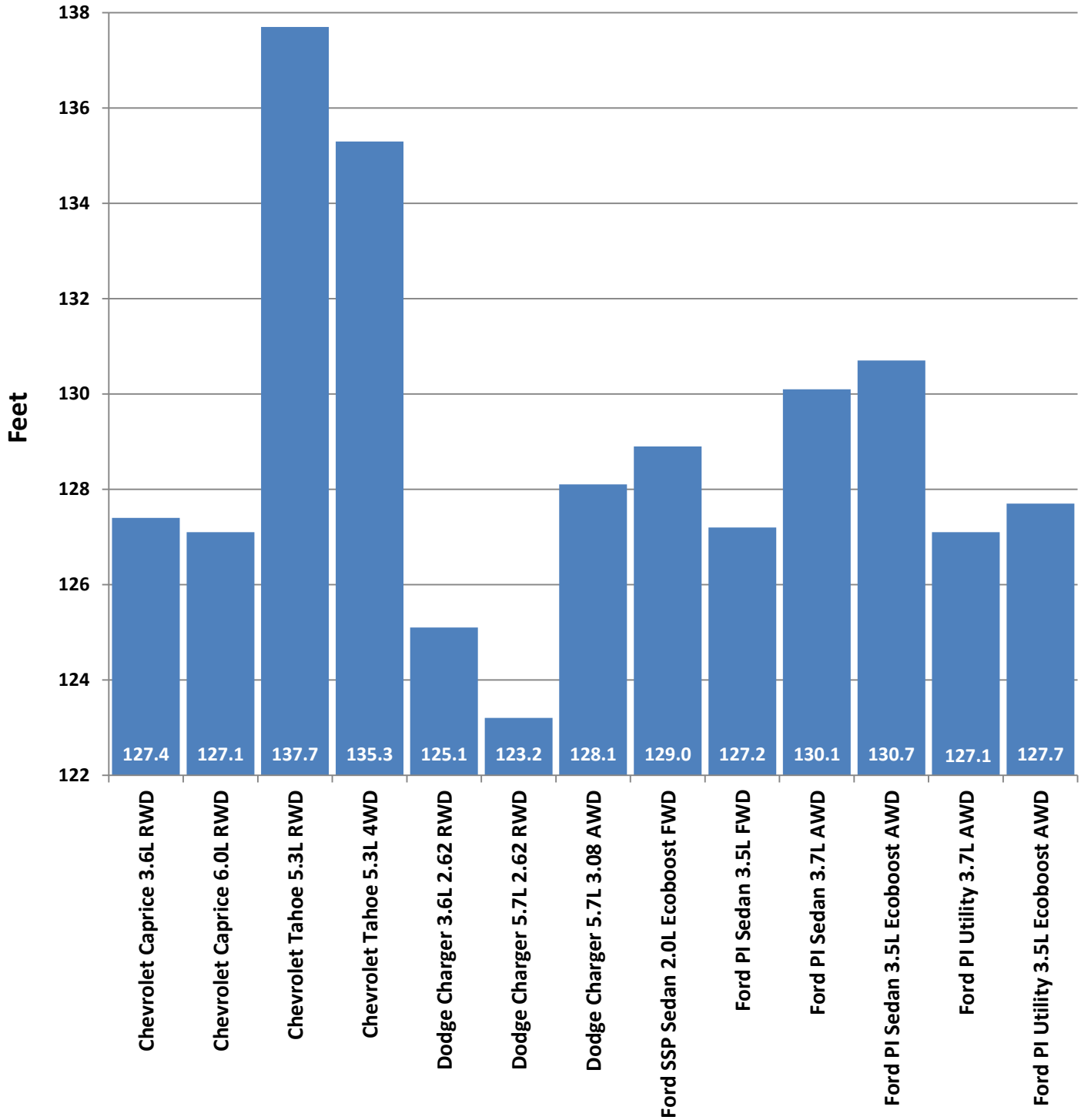
Phase III

OVERALL AVERAGE DECELERATION RATE:	**30.33 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**127.7 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*

2017 Model Year
Brake Testing
Projected Stopping Distance



POLICE

POLICE

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.

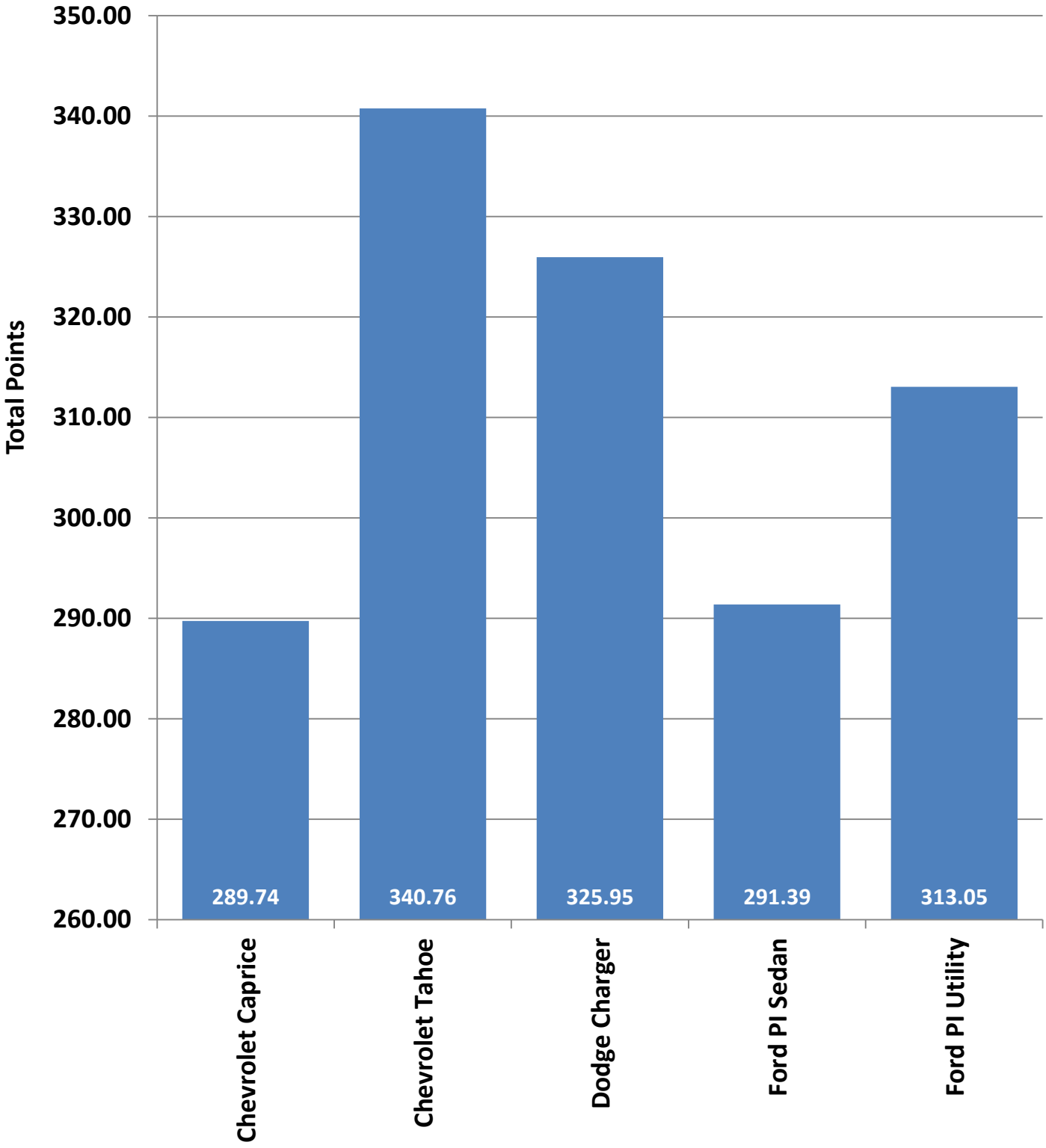
The installation and communications portion of the evaluation is conducted by personnel from the Michigan Public Safety Communications System. The scores are given based on the relative difficulty of the necessary installations.

ERGONOMICS AND COMMUNICATIONS

	Chevrolet Caprice	Chevrolet Tahoe	Dodge Charger	Ford Police Interceptor Sedan	Ford Police Interceptor Utility
FRONT SEAT					
Padding	8.00	8.20	8.00	6.90	7.20
Depth of Bucket Seat	7.70	8.70	7.80	6.90	6.90
Adjustability – Front to Rear	7.00	9.10	8.50	8.10	8.00
Upholstery	7.90	8.40	8.20	7.60	7.70
Bucket Seat Design	7.20	8.80	8.30	6.60	6.50
Headroom	7.20	9.50	8.20	8.40	8.70
Seatbelts	7.70	7.90	8.60	7.70	7.78
Ease of Entry and Exit	7.20	9.10	7.80	6.30	8.10
Overall Comfort Rating	7.10	9.00	8.20	7.00	7.67
REAR SEAT					
Leg room – Front seat back	7.50	8.50	6.50	6.30	7.90
Ease of Entry and Exit	7.40	8.20	6.40	5.90	7.90
INSTRUMENTATION					
Clarity	7.90	9.40	9.30	7.50	7.80
Placement	7.50	8.60	8.90	7.70	7.80
VEHICLE CONTROLS					
Pedals, Size, and Position	7.40	8.40	8.40	8.20	8.40
Power Window Switch	8.00	9.00	9.00	8.10	8.40
Stability/Traction Control Switch	7.10	8.44	8.20	6.13	5.86
Automatic Door Lock Switch	8.30	8.30	8.50	7.40	7.90
Outside Mirror Controls	8.20	8.40	8.30	8.00	8.30
Steering Wheel, Size, Tilt Release, and Surface	7.90	8.10	8.80	7.90	7.40
Heat/AC Vent Placement and Adjustability	8.20	8.70	8.50	7.90	7.90
Trunk Release Switch	7.60	7.00	8.60	7.10	6.70
VISIBILITY					
Front (Windshield)	8.20	8.90	8.60	8.20	8.60
Rear (Back Window)	7.40	8.10	8.10	6.70	6.90
Left Rear Quarter	7.50	7.90	7.60	7.30	7.40
Right Rear Quarter	7.50	7.60	7.50	7.20	7.60
Outside Mirrors	6.80	8.20	7.67	7.70	7.90
COMMUNICATIONS					
Dashboard Accessibility	44.34	53.00	51.65	48.34	52.67
Trunk Accessibility	33.67	42.66	39.33	34.16	41.00
Engine Compartment	14.33	24.66	22.50	18.16	20.17
TOTAL SCORES	**289.74**	**340.76**	**325.95**	**291.39**	**313.05**

2017 Ergonomics/Communications

Vehicle Scores



FUEL ECONOMY

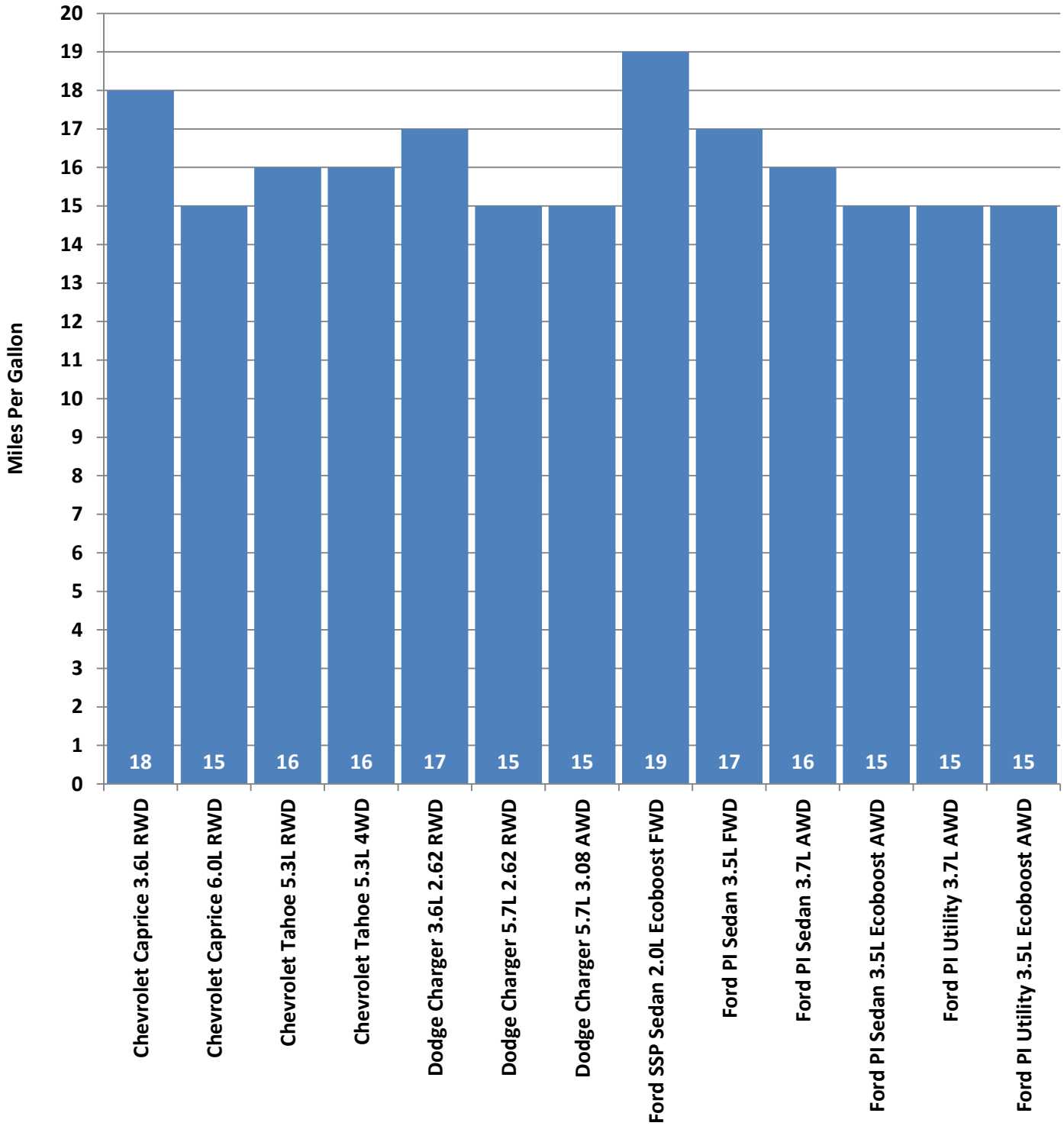
The respective auto manufacturers provided estimates for fuel economy as shown below.

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 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 5.7L 2.62 RWD	15	25	18
Dodge Charger 5.7L 3.08 AWD	15	23	18
Ford SSP Sedan 2.0L Ecoboost FWD	19	28	22
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 Utility 3.7L AWD	15	20	17
Ford PI Utility 3.5L Ecoboost AWD	15	20	17

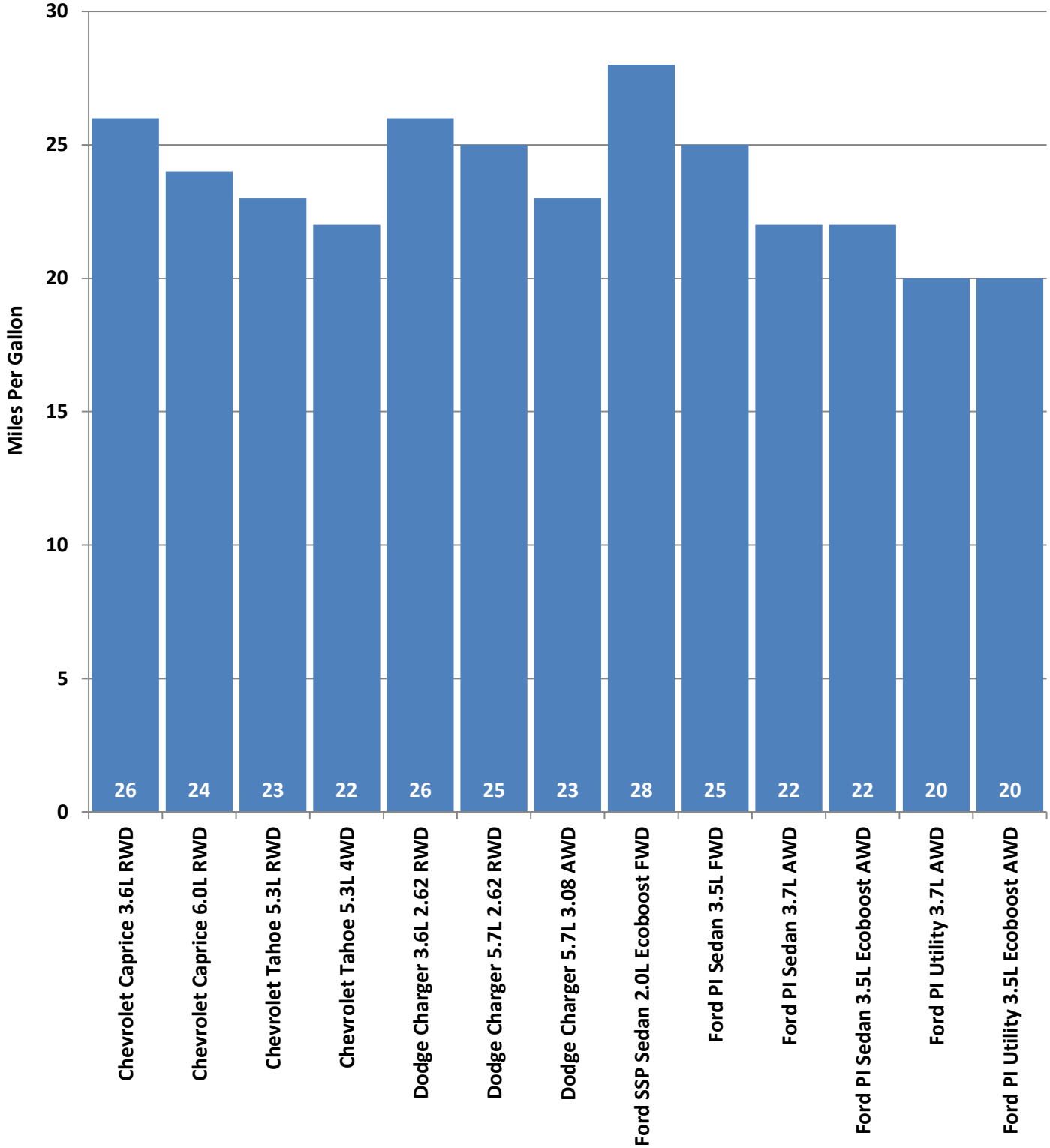
2017 FUEL ECONOMY COMPARISON

"CITY" EPA ESTIMATES



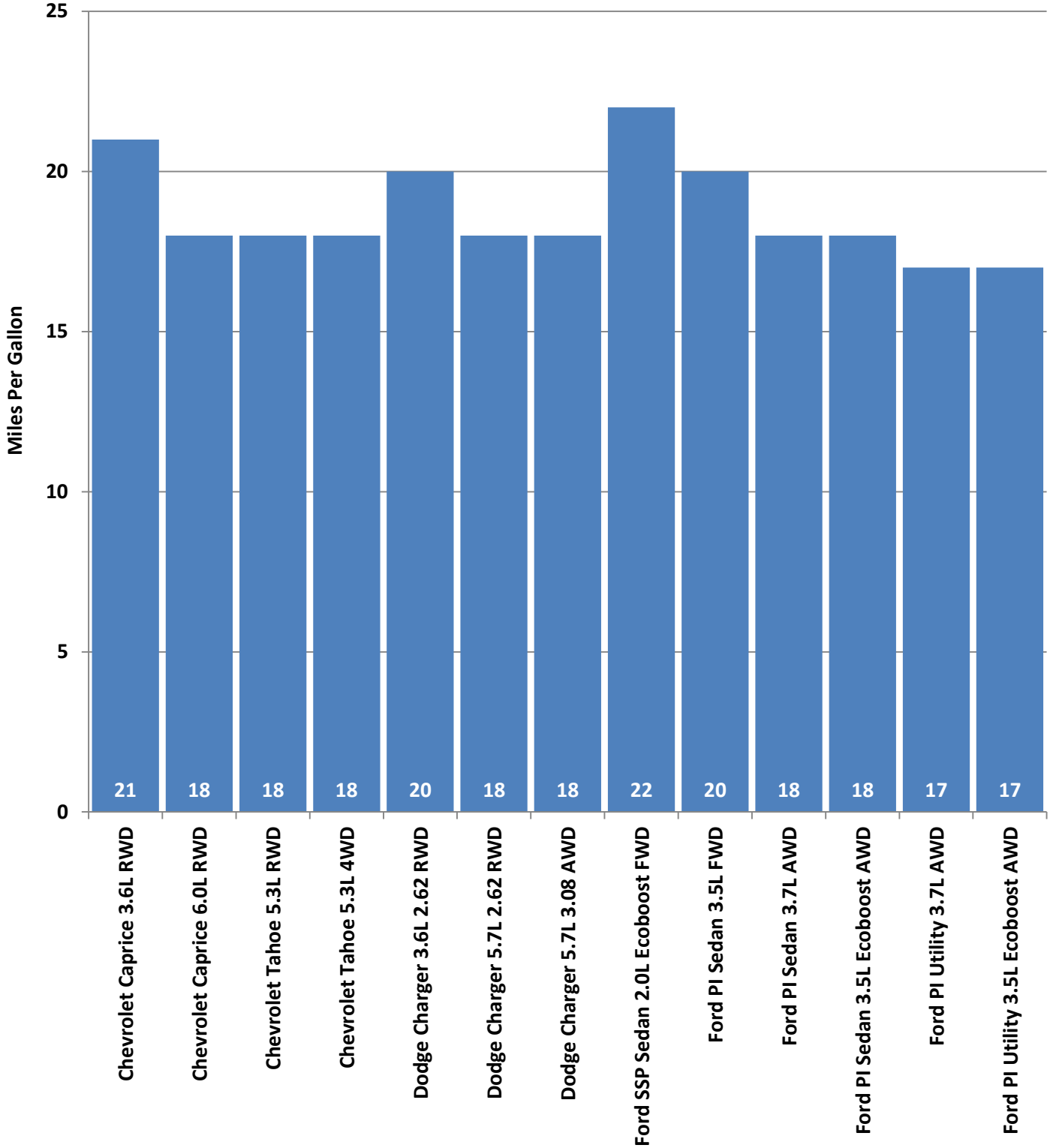
2017 FUEL ECONOMY COMPARISON

"HIGHWAY" EPA ESTIMATES



2017 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	16RP
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	650 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, rain or road riding modes 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 (including take-down lights and alley lights), 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 models 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, Dynamic ESA electronic suspension control, 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 F3P

MAKE & MODEL	Can-AM Spyder F3P
SALES CODE	000H4HA00
POWERTRAIN INFORMATION	
CUBIC INCHES	81.16
HORSEPOWER SAENET	115
ALTERNATOR	850 W @ 910 Engine RPM 1250 W @1720 Engine RPM
TORQUE	96 ft/lbs. @ 5,000 RPM
BATTERY	12V – 21 Ah
TRANSMISSION	Sequential Electronic 6-speed Semi-Automatic with Remote Electronic Type Reverse Interlock
SUSPENSION TYPE (FRONT)	Double A-Arm with Anti-Roll Bar
SUSPENSION TYPE (REAR)	Swing Arm with Mono Shock
TURNING CIRCLE (CURB TO CURB)	118 inches
TIRE SIZE, LOAD & SPEED RATING	KR31 165/55/R15 (Front) (Special Motorcycle Type) KR21 225/50/R15 (Rear) (Special Motorcycle Type)
GROUND CLEARANCE, MINIMUM	4.5 inches
BRAKE SYSTEM	Foot-Actuated, Fully Integrated Hydraulic 3-Wheel Braking System with ABS and EBD
FUEL CAPACITY	7.1 Gallons/27 Liters
GENERAL MEASUREMENTS	
WHEELBASE	67.28 inches
LENGTH	104 inches
TEST WEIGHT	1,015 lbs.
HEIGHT	49.2 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	397 lbs
EPA MILEAGE EST. (MPG)	
CITY	Not Provided by Manufacturer
HIGHWAY	Not Provided by Manufacturer
COMBINED	Not Provided by Manufacturer

MANUFACTURER HIGHLIGHTS

The Can-AM Spyder F3P is based on the F3 model, which features a cruising riding position and a lower center of gravity, making it the most nimble Spyder yet. Along with its unique Y-frame configuration and array of sophisticated safety and security systems, the Spyder F3-P adds a layer of convenience with its police accessories such as a siren, LED emergency lights, and increased cargo capacity, wires with 12V and USB connectors. Officers can also customize their bike's fit for their size, stature and riding style with the F3 model's industry-exclusive UFIT system of adjustable foot peg positions and alternative handlebars.

Spyder F3 P Features:

- Vehicle Stability System with ABS, Traction Control and Stability Control
- Dynamic Power Steering
- UFit Custom Fitting System (rider footpegs and handlebars)
- Anti-Theft System
- Cruise Control
- Quick Pursuit Ignition
- 100-W Siren with Wail, Yelp, and Air Horn
- 12 Blue / Red LED Emergency Lighting with 25 Selectable Flash Patterns and 360° Visibility
- Adjustable Driver Backrest
- Mid-Height Windshield
- High Strength Aluminum 11 Gallon (42 Liter) Removable Top Case with Two USB, and Two 12V Power Outlets
- High Strength Aluminum 19.5 Gallon (74 Liter) Removable Side Cases (Optional)
- Auxiliary Power: Two 12V and Two USB Outlets in the Top Case, Plus One 12V Connector in the Front Cargo Compartment
- Thumb Accessible Control, One-Touch Light and Siren Operation

Harley-Davidson FLHTP Electra Glide

MAKE & MODEL	Harley-Davidson FLHTP (Electra Glide)
SALES CODE	Not Provided by Manufacturer
POWERTRAIN INFORMATION	
CUBIC INCHES	107 CID
LITERS	1746 CC
HORSEPOWER SAENET	N/A
ALTERNATOR	48 Amp (producing approximately 28 amps at idle)
TORQUE	111.4 @ 3250 RPM
BATTERY	12VDC, 28 Amp/Hour, 270 CCA
TRANSMISSION	6 Speed Manual / Assist and Slip Wet 9 Plate Clutch
SUSPENSION TYPE (FRONT)	Hydraulic 49 mm Telescopic Forks with Showa® Dual Bending Valve Technology improving dampening performance
SUSPENSION TYPE (REAR)	Swing Arm with Hand Adjustable Emulsion Rear 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	5.1 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 – 515 lbs.
EPA MILEAGE EST. (MPG)	
CITY	Not Provided By Manufacturer
HIGHWAY	Not Provided By Manufacturer
COMBINED	45 MPG

MANUFACTURER HIGHLIGHTS

- 107 CID Milwaukee 8™ Engine: pushrod-operated, overhead valves with hydraulic, self-adjusting lifters, four valves per cylinder and featuring EITMS (Engine Idle Temperature Management System), Compression ratio: 10.0:1, Electronic Sequential Port Fuel Injection System (ESPFI), Single Cam design
- Fan-Assisted Oil Cooler
- Hydraulically Actuated Clutch with Assist and Slip 9 Plate Wet Clutch
- Showa® Dual Bending Valve Technology Front Suspension with 117mm of Travel, Larger pistons improve dampening performance over the range of suspension travel.
- Hand Adjustable Read Emulsion Shocks
- 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
- Polycarbonate Windshield designed to breakaway with minimal impact force
- One-Touch Saddlebag Lid Latches
- Pivoting Footboards
- 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	107 CID
LITERS	1746 CC
HORSEPOWER SAENET	Not Provided by Manufacturer
ALTERNATOR	48 AMP (producing approximately 28 Amps at idle)
TORQUE	111.4 @ 3250 RPM
BATTERY	12VDC, 28 Amp/Hour, 270 CCA
TRANSMISSION	6 Speed Manual / Assist and Slip Wet 9 Plate Clutch
SUSPENSION TYPE (FRONT)	Hydraulic 49 mm Telescopic Forks with Showa® Dual Bending Valve Technology improving dampening performance
SUSPENSION TYPE (REAR)	Swing Arm with Hand Adjustable Emulsion Rear 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	5.1 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 – 515 lbs.
EPA MILEAGE EST. (MPG)	
CITY	Not Provided by Manufacturer
HIGHWAY	Not Provided by Manufacturer
COMBINED	45 MPG

MANUFACTURER HIGHLIGHTS

- 107 CID Milwaukee 8™ Engine: pushrod-operated, overhead valves with hydraulic, self-adjusting lifters, four valves per cylinder and featuring EITMS (Engine Idle Temperature Management System), Compression ratio: 10.0:1, Electronic Sequential Port Fuel Injection System (ESPFI)< Single Cam design, Air and Oil cooled.
- Fan-Assisted Oil Cooler
- Hydraulically Actuated Clutch with Assist and Slip 9 Plate Wet Clutch
- Showa® Dual Bending Valve Technology Front Suspension with 117mm of Travel, Larger pistons improve dampening performance over the range of suspension travel
- Hand Adjustable Rear Emulsion Shocks
- 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
- Polycarbonate Windshield designed to breakaway with minimal impact force
- One-Touch Saddlebag Lid Latches
- Pivoting Footboards
- 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 FLHTP Electra Glide Stage 3

MAKE & MODEL	Harley-Davidson FLHTP (Electra Glide) Stage 3 Engine
SALES CODE	Not Provided by Manufacturer
POWERTRAIN INFORMATION	
CUBIC INCHES	114 CID
LITERS	1868 CC
HORSEPOWER SAENET	Not Provided by Manufacturer
ALTERNATOR	48 AMP (producing approximately 28 Amps at idle)
TORQUE	124+ @ 3250 RPM
BATTERY	12VDC, 28 Amp/Hour, 270 CCA
TRANSMISSION	6 Speed Manual / Wet 9 Plate Assist and Slip Clutch
SUSPENSION TYPE (FRONT)	Hydraulic 49 mm Telescopic Forks with Showa® Dual Bending Valve Technology improving dampening performance
SUSPENSION TYPE (REAR)	Swing Arm with Hand Adjustable Emulsion Rear 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	5.1 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 – 515 lbs.
EPA MILEAGE EST. (MPG)	
CITY	Not Provided by Manufacturer
HIGHWAY	Not Provided by Manufacturer
COMBINED	Not Provided by Manufacturer

MANUFACTURER HIGHLIGHTS

- H-D Milwaukee 8™ Stage 3 Performance Engine Upgrade Kit (Part # 9250056)
  - ✓ Increases displacement from the OE 107 CID to 114 CID
  - ✓ SE Bolt on 4.075” Cylinders
  - ✓ 11:1 High Compression Aluminum Coated Pistons
  - ✓ High Performance Piston Rings
  - ✓ SE-498 Cam
  - ✓ SE Performance Valve Springs
  - ✓ SE High Performance Tappets
  - ✓ Engine Gaskets
- H-D High Flow Air Cleaner (Part # 29400245)
- SE Pro Street Tuner (Part # 41000008B)
- H-D Milwaukee Eight™ Stage 3 Download-50 State EPA Compliant (Speed Limited-110 mph)

When installed by an authorized H-D Dealer at the time of new vehicle delivery, these kits do not impact the vehicles limited warranty

The OE Engine is the new 107 CID Milwaukee Eight™: pushrod-operated overhead valves with hydraulic self-adjusting lifters, four valves per cylinder and featuring Engine Idle Temperature Management System (EITMS), compression ratio: 10.0:1, Electronic Sequential Port Fuel Injection System (ESPFI), Single Cam design, Air and Oil cooled.

- Fan Assisted Oil Cooler
- Hydraulically Actuated Assist and Slip 9 Plate Wet Clutch
- Showa® Dual Bending Valve Technology Front Suspension with 117mm of travel, larger pistons improve dampening performance over the range of suspension travel
- Hand Adjustable Rear Emulsion Shocks
- 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
- Polycarbonate Windshield designed to breakaway with minimal impact force
- One-Touch Saddlebag Lid Latches
- Pivoting Footboards
- 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 DSRP

MAKE & MODEL	Zero DSRP
SALES CODE	Not Provided by Manufacturer
POWERTRAIN INFORMATION	
CUBIC INCHES	N/A
LITERS	N/A
HORSEPOWER SAENET	67 HP (50kW) @ 4,000 RPM
ALTERNATOR	N/A
TORQUE	106 ft/lb (144 Nm)
BATTERY	ZForce Li-Ion 15.9 kWh
TRANSMISSION	Clutchless Direct Drive
SUSPENSION TYPE (FRONT)	Showa® 41 mm inverted cartridge forks, with adjustable spring preload, compression and rebound damping
SUSPENSION TYPE (REAR)	Showa® 40 mm piston, piggy-back reservoir shock with adjustable spring preload, compression and rebound damping
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	487 lbs.
HEIGHT	50.5 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	288 lbs.
EPA MILEAGE EST.	
CITY	435 (equiv.)
HIGHWAY	210 (equiv.)
COMBINED	Not Provided by Manufacturer

MANUFACTURER HIGHLIGHTS

The new 100% electric Zero DSRP police motorcycle incorporates Zero's high-performance motor and 660 amp controller to deliver more torque and more power. The DSRP 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 and gain tactical advantages. Having a "fuel" cost of a penny per mile and maintenance-free powertrain, the Zero DSRP 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
2017 MODEL YEAR MOTORCYCLE DYNAMICS SCHEDULE
SEPTEMBER 14, 2016

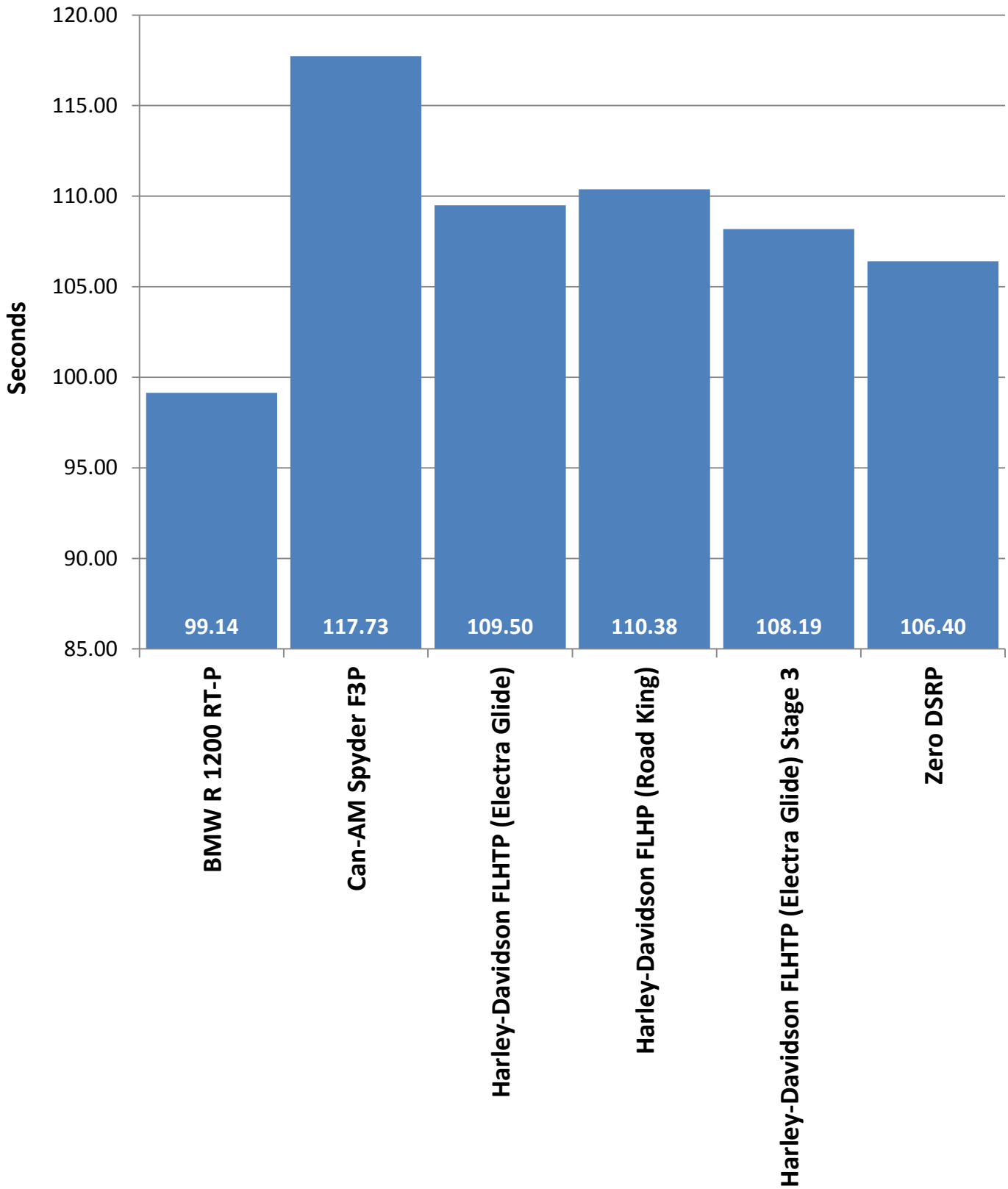
	JOHNSON	DARLINGTON	SCHWALM	TRAMMEL
9:30 a.m.	Harley-Davidson FLHTP Electra Glide	Harley-Davidson FLHP Road King		
10:00 a.m.			Can-AM Spyder F3P	Zero DSRP
10:30 a.m.	BMW R 1200 RT-P	Harley-Davidson FLHTP Electra Glide Stage 3		
11:00 a.m.	Harley-Davidson FLHP Road King	Harley-Davidson FLHTP Electra Glide		
11:30 a.m.			Zero DSRP **(crashed lap 2)**	Can-AM Spyder F3P
12:30 p.m.	Harley-Davidson FLHTP Electra Glide Stage 3	BMW R 1200 RT-P		
1:00 p.m.		Can-AM Spyder F3P	Harley-Davidson FLHP Road King **(MCCARTHY)**	Harley-Davidson FLHTP Electra Glide
1:30 p.m.			BMW R 1200 RT-P **(MCCARTHY)**	Harley-Davidson FLHTP Electra Glide Stage 3
2:00 p.m.	Can-AM Spyder F3P		Harley-Davidson FLHTP Electra Glide **(MCCARTHY)**	Harley-Davidson FLHP Road King
2:30 p.m.			Harley-Davidson FLHTP Electra Glide Stage 3 **(MCCARTHY)**	BMW R 1200 RT-P

MOTORCYCLE DYNAMICS TESTING ON SEPTEMBER 14, 2016

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
BMW R 1200 RT-P	DARLINGTON	01:37.74	01:37.91	01:38.74	01:39.18	01:39.18	01:38.55
	JOHNSON	01:36.93	01:37.19	01:37.27	01:37.28	01:37.36	01:37.21
	MCCARTHY	01:40.89	01:41.24	01:41.86	01:41.98	01:42.15	01:41.62
	TRAMMEL	01:38.64	01:38.85	01:39.13	01:39.57	01:39.71	01:39.18
Overall Average							**01:39.14**
Can-AM Spyder F3P	DARLINGTON	01:56.18	01:56.46	01:56.83	01:57.43	01:57.47	01:56.87
	JOHNSON	01:55.62	01:56.75	01:58.02	01:58.59	02:00.92	01:57.98
	SCHWALM	01:59.34	01:59.46	01:59.89	01:59.90	02:00.23	01:59.76
	TRAMMEL	01:55.64	01:56.17	01:56.32	01:56.54	01:56.84	01:56.30
Overall Average							**01:57.73**
Harley-Davidson FLHTP (Electra Glide)	DARLINGTON	01:49.21	01:49.38	01:49.46	01:49.47	01:49.51	01:49.41
	JOHNSON	01:47.24	01:47.62	01:47.63	01:47.81	01:47.95	01:47.65
	MCCARTHY	01:50.75	01:51.44	01:51.48	01:51.51	01:51.73	01:51.38
	TRAMMEL	01:49.28	01:49.51	01:49.66	01:49.66	01:49.72	01:49.57
Overall Average							**01:49.50**
Harley-Davidson FLHP (Road King)	DARLINGTON	01:50.97	01:51.05	01:51.08	01:51.30	01:51.65	01:51.21
	JOHNSON	01:47.55	01:47.93	01:48.20	01:48.21	01:48.26	01:48.03
	MCCARTHY	01:52.64	01:52.86	01:52.93	01:53.25	01:53.29	01:52.99
	TRAMMEL	01:48.77	01:49.27	01:49.41	01:49.46	01:49.52	01:49.29
Overall Average							**01:50.38**
Harley-Davidson FLHTP (Electra Glide) Stage 3	DARLINGTON	01:47.54	01:47.58	01:47.59	01:47.62	01:47.62	01:47.59
	JOHNSON	01:46.94	01:46.95	01:47.09	01:47.13	01:47.33	01:47.09
	MCCARTHY	01:49.62	01:49.63	01:49.94	01:50.00	01:50.16	01:49.87
	TRAMMEL	01:47.92	01:48.03	01:48.34	01:48.35	01:48.39	01:48.21
Overall Average							**01:48.19**
Zero DSRP	DARLINGTON	-	-	-	-	-	-
	JOHNSON	-	-	-	-	-	-
	SCHWALM	01:45.54	-	-	-	-	01:45.54
	TRAMMEL	01:45.87	01:47.00	01:47.54	01:47.92	01:47.93	01:47.25
Overall Average							**01:46.40**

**Due to the Zero DSRP crashing in lap two of the second run, the Zero was unable to complete the remainder of the police vehicle evaluation.

2017 Model Year
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 Race Logic Vbox 3i GPS data collection unit, 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 17, 2016

BMW R 1200 RT-P

BEGINNING TIME: 5:30 p.m. **TEMPERATURE:** 74.3° F
WIND VELOCITY: 5.8 mph **WIND DIRECTION:** 225°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	4.09	4.81	4.18	4.16	**4.31**
0 – 80	6.28	6.89	6.37	6.26	**6.45**
0 – 100	9.80	10.18	9.87	9.54	**9.85**

DISTANCE TO REACH 100 MPH: .16 mile
DISTANCE TO REACH 120 MPH: .36 mile

TOP SPEED ATTAINED: 136 mph

DISTANCE TO REACH TOP SPEED: 4.63 miles
TIME TO REACH TOP SPEED: 132.17 seconds

Can-AM Spyder F3P

BEGINNING TIME: 3:29 p.m. **TEMPERATURE:** 71.4° F
WIND VELOCITY: 5.3 mph **WIND DIRECTION:** 262°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	5.69	5.98	5.52	5.85	**5.76**
0 – 80	9.32	9.51	9.16	9.51	**9.38**
0 – 100	16.89	16.38	16.89	16.02	**16.55**

DISTANCE TO REACH 100 MPH: .87 mile
DISTANCE TO REACH 120 MPH: 8.87 miles

TOP SPEED ATTAINED: 120 mph

DISTANCE TO REACH TOP SPEED: 8.87 miles
TIME TO REACH TOP SPEED: 294.24 seconds

Harley-Davidson FLHTP (Electra Glide)

BEGINNING TIME: 4:38 p.m. **TEMPERATURE:** 73.9° F
WIND VELOCITY: 4.9 mph **WIND DIRECTION:** 260°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	5.38	5.32	5.44	5.37	**5.38**
0 – 80	9.51	9.38	9.50	9.53	**9.48**
0 – 100	19.04	17.83	19.38	17.52	**18.44**

DISTANCE TO REACH 100 MPH: 0.36 mile
DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 109 mph

DISTANCE TO REACH TOP SPEED: 4.28 miles
TIME TO REACH TOP SPEED: 150.63 seconds

TEST LOCATION: FCA Proving Grounds **DATE:** September 17, 2016

Harley-Davidson FLHP (Road King)

BEGINNING TIME: 4:06 p.m. **TEMPERATURE:** 73.7° F
WIND VELOCITY: 5.1 mph **WIND DIRECTION:** 240°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	5.51	5.41	5.42	5.34	**5.42**
0 – 80	9.66	9.10	9.36	9.12	**9.31**
0 – 100	18.84	16.69	18.66	17.13	**17.83**

DISTANCE TO REACH 100 MPH: 0.35 mile
DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 112 mph

DISTANCE TO REACH TOP SPEED: 4.25 miles
TIME TO REACH TOP SPEED: 148.58 seconds

Harley-Davidson FLHTP (Electra Glide) Stage 3

BEGINNING TIME: 5:04 p.m. **TEMPERATURE:** 74.2° F
WIND VELOCITY: 5.0 mph **WIND DIRECTION:** 247°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	4.50	4.38	4.41	4.43	**4.43**
0 – 80	7.47	7.23	7.30	7.34	**7.34**
0 – 100	12.69	10.33	12.46	12.26	**11.94**

DISTANCE TO REACH 100 MPH: 0.21
DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 110 mph

DISTANCE TO REACH TOP SPEED: 4.36 mile
TIME TO REACH TOP SPEED: 150.25 seconds

Zero DSRP

BEGINNING TIME: **TEMPERATURE:**
WIND VELOCITY: **WIND DIRECTION:**

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE
0 – 60	**DID NOT COMPLETE DUE TO CRASH**				
0 – 80					
0 – 100					

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

TOP SPEED ATTAINED: mph

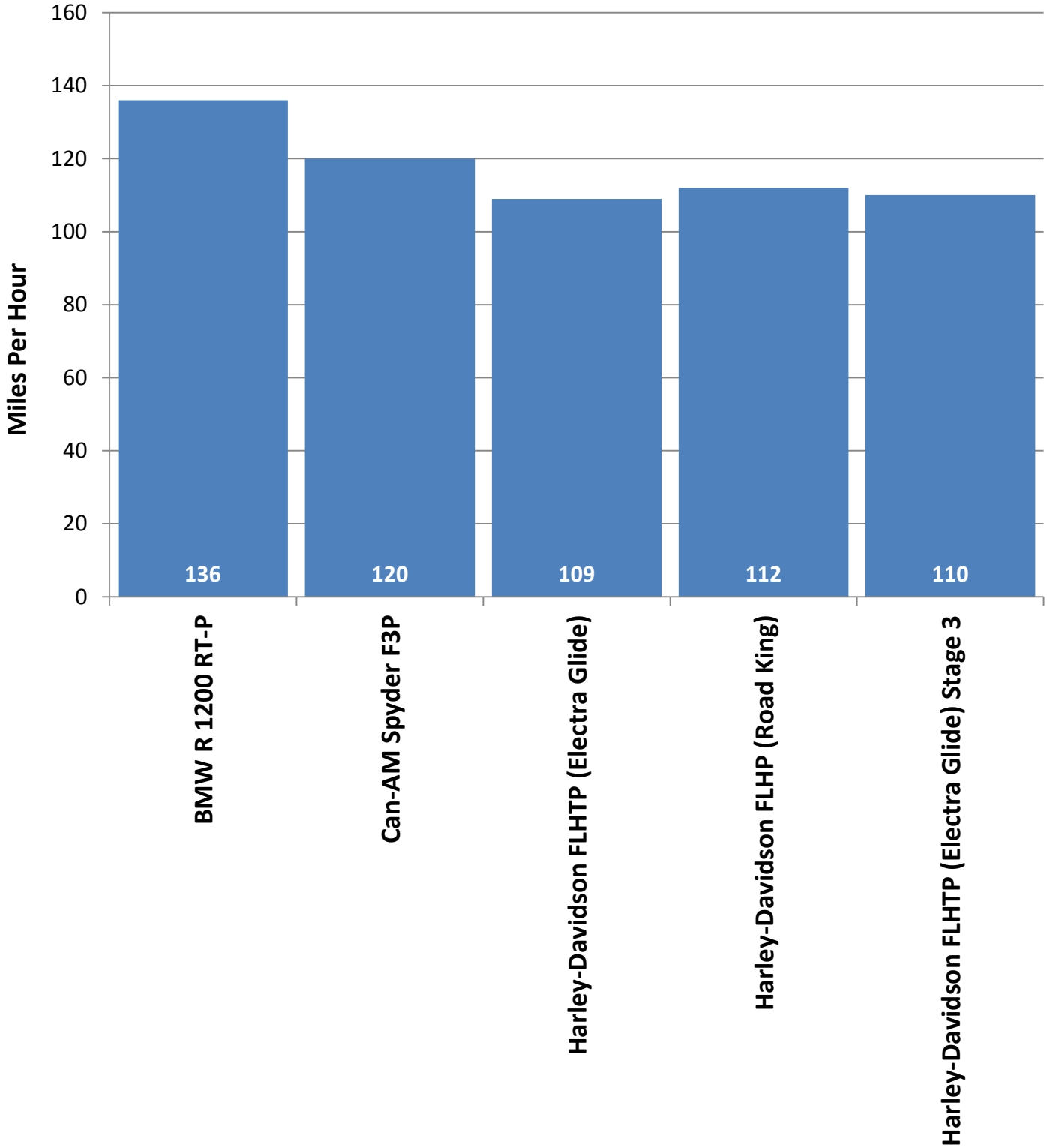
DISTANCE TO REACH TOP SPEED: mile
TIME TO REACH TOP SPEED: seconds

SUMMARY OF MOTORCYCLE ACCELERATION & TOP SPEED

	BMW R 1200 RT-P	Can-AM Spyder F3P	Harley-Davidson FLHTP (Electra Glide)	Harley-Davidson FLHP (Road King)	Harley-Davidson FLHTP (Electra Glide) Stage 3
ACCELERATION					
0 – 20 mph (seconds)	1.57	1.64	1.24	1.29	1.24
0 – 30 mph (seconds)	2.21	2.55	1.97	2.02	1.86
0 – 40 mph (seconds)	2.79	3.41	2.93	2.86	2.52
0 – 50 mph (seconds)	3.49	4.49	3.95	4.01	3.47
0 – 60 mph (seconds)	4.31	5.76	5.38	5.42	4.43
0 – 70 mph (seconds)	5.30	7.46	7.05	7.10	5.85
0 – 80 mph (seconds)	6.45	9.38	9.48	9.31	7.34
0 – 90 mph (seconds)	7.97	11.96	12.34	12.34	9.51
0 – 100 mph (seconds)	9.85	16.55	18.44	17.83	11.94
TOP SPEED (mph)	136	120	109	112	110
DISTANCE TO REACH					
100 mph (miles)	.16	.31	.36	.35	.21
120 mph (miles)	.36	8.87	N/A	N/A	N/A
Top Speed (miles)	4.63	8.87	4.28	4.25	4.36

2017 Motorcycle Top Speed Comparison

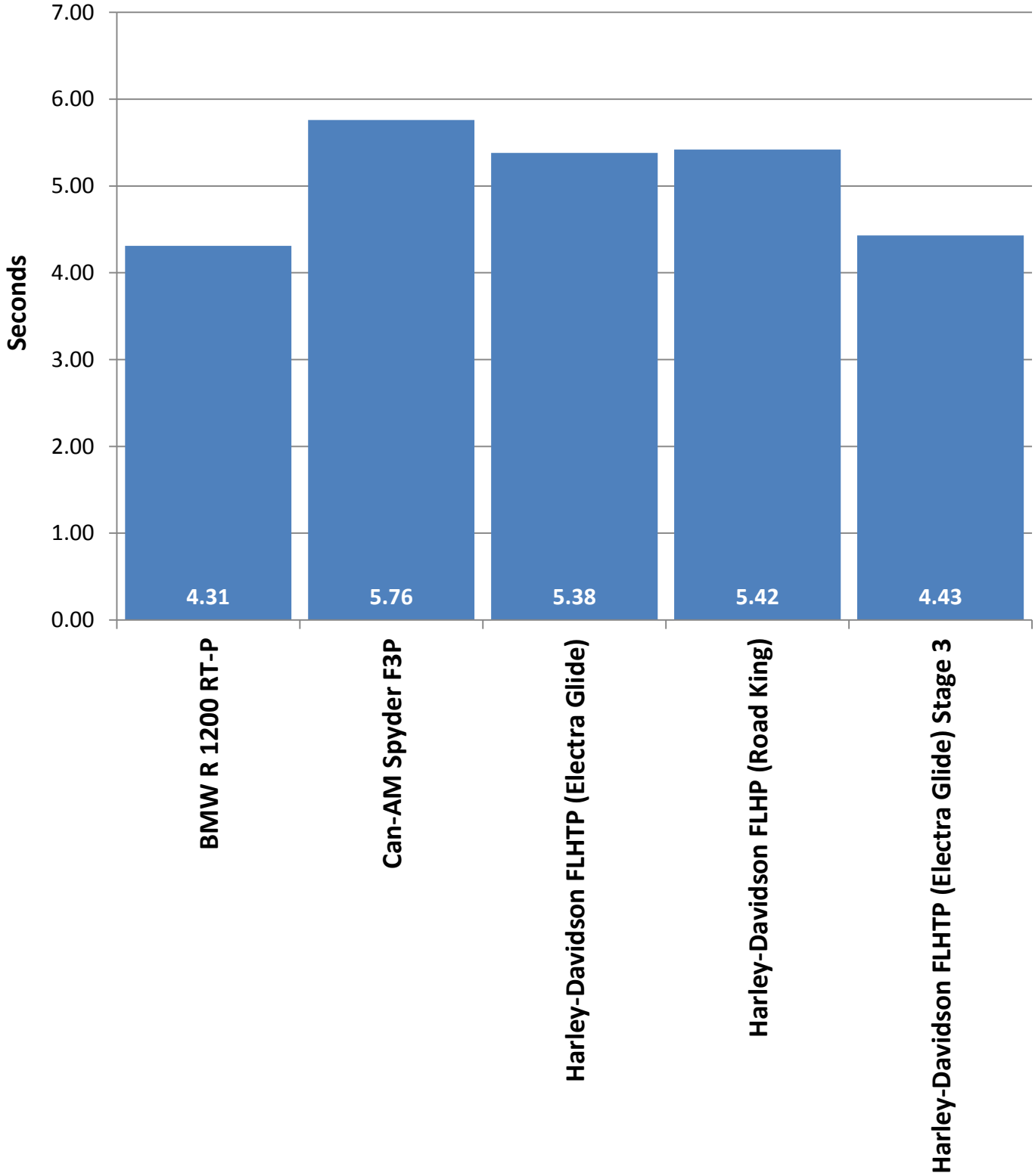
Top Speed Attained



2017 Motorcycle Acceleration Comparison

Acceleration Times

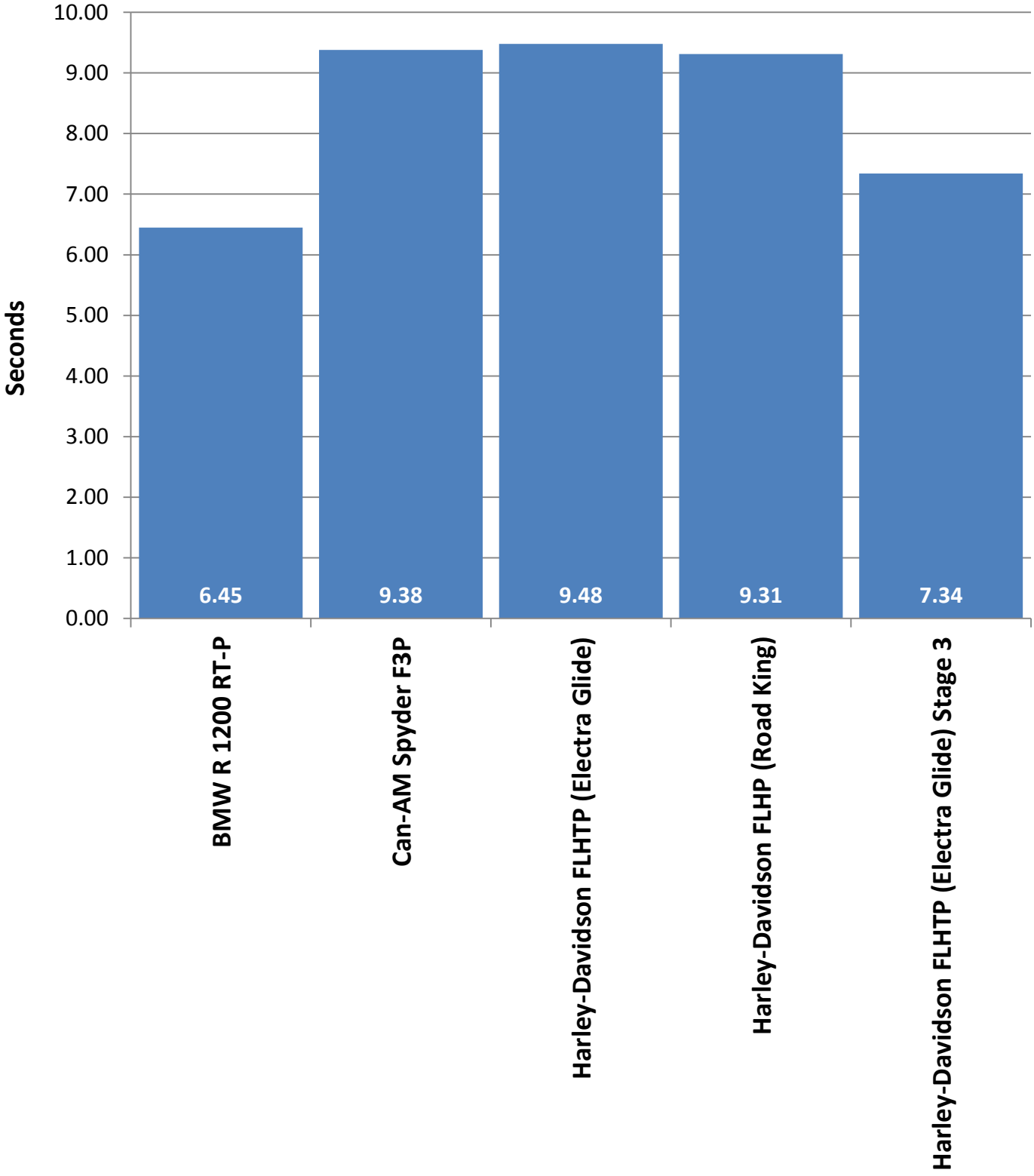
0-60 mph



2017 Motorcycle Acceleration Comparison

Acceleration Times

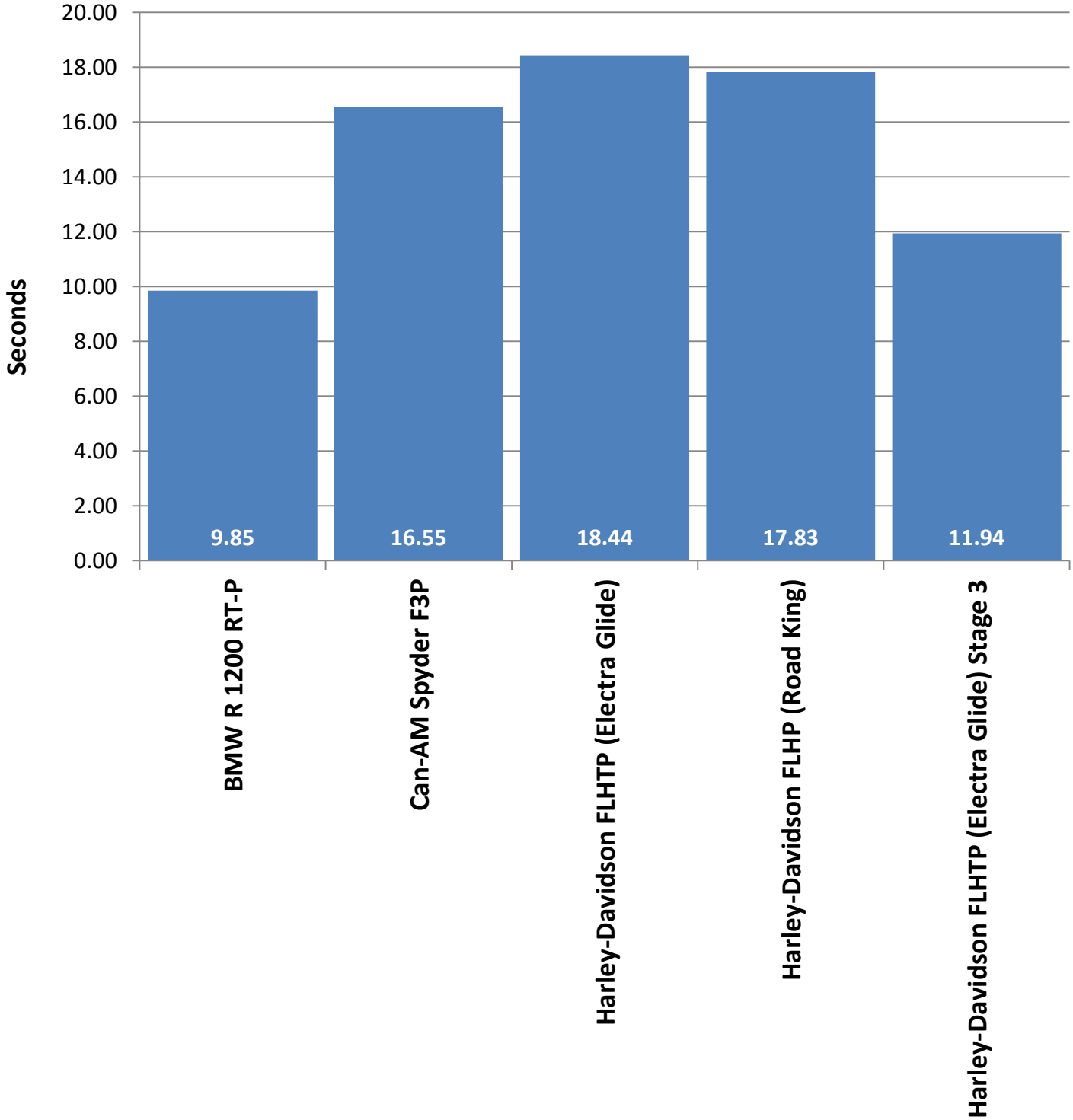
0-80 mph



2017 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 Race Logic Vbox 3i GPS based data collection 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 13, 2016	**BEGINNING TIME:** 10:15 a.m.

AIR TEMPERATURE: 68° 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	60.35	136.88	28.62
2	60.47	139.88	28.12
3	60.75	141.98	27.96
4	60.72	132.89	29.84
5	60.72	137.60	28.82
6	61.35	140.11	28.89
7	60.56	134.89	29.24
8	60.47	135.22	29.09
9	60.52	138.86	28.37
10	60.44	140.13	28.04
AVERAGE DECELERATION RATE:			**28.70 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	140.21	27.16
2	61.23	141.13	28.57
3	60.70	144.52	27.42
4	60.89	139.02	28.69
5	59.56	132.85	28.72
6	60.00	135.10	28.66
7	61.21	142.62	28.26
8	61.54	140.42	29.01
9	60.12	135.46	28.70
10	61.34	141.22	28.66
AVERAGE DECELERATION RATE:			**28.39 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.55 ft/s²**

PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**135.6 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 F3P

TEST LOCATION: MSP Precision Drive Track	**DATE:** September 13, 2016	**BEGINNING TIME:** 11:32 a.m.

AIR TEMPERATURE: 73° F	**TRACK SURFACE TEMPERATURE:** 87° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	59.73	115.29	33.28
2	59.65	114.67	33.38
3	59.50	118.66	32.09
4	59.78	120.04	32.02
5	59.96	116.88	33.09
6	59.94	122.92	31.44
7	59.69	116.61	32.86
8	59.46	115.80	32.84
9	**Not recorded due to data collection error		
10	59.81	117.04	32.88
AVERAGE DECELERATION RATE:			**32.65 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	59.71	116.07	33.04
2	59.81	115.03	33.45
3	59.90	118.68	32.52
4	59.79	117.33	32.77
5	**Not recorded due to data collection error		
6	59.96	128.94	29.99
7	59.91	117.44	32.87
8	59.57	116.46	32.77
9	59.40	116.42	32.60
10	59.90	119.57	32.28
AVERAGE DECELERATION RATE:			**32.48 ft/s²**

Phase II

OVERALL AVERAGE DECELERATION RATE:	**32.57 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**118.9 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 13, 2016	**BEGINNING TIME:** 10:41 a.m.

AIR TEMPERATURE: 69° F	**TRACK SURFACE TEMPERATURE:** 81° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.58	131.91	29.92
2	60.68	132.21	29.96
3	60.51	134.12	29.36
4	61.27	138.64	29.12
5	61.04	144.03	27.82
6	59.73	132.78	28.90
7	59.54	130.38	29.25
8	60.21	135.25	28.83
9	60.23	134.03	29.11
10	59.36	136.76	27.71
AVERAGE DECELERATION RATE:			**29.00 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	60.68	139.87	28.32
2	60.15	139.23	27.95
3	60.28	134.82	28.99
4	59.65	137.31	27.87
5	60.86	140.59	28.34
6	60.04	138.53	27.99
7	60.23	137.68	28.34
8	60.92	135.29	29.51
9	60.55	136.12	28.97
10	60.37	143.83	27.25
AVERAGE DECELERATION RATE:			**28.35 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.68 ft/s²**

PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**135.0 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 13, 2016	**BEGINNING TIME:** 9:48 a.m.

AIR TEMPERATURE: 66° F	**TRACK SURFACE TEMPERATURE:** 72° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.01	134.88	28.72
2	60.00	137.70	28.12
3	60.57	142.88	27.62
4	60.35	134.94	29.03
5	60.74	141.66	28.01
6	60.20	137.34	28.38
7	60.11	139.06	27.95
8	61.17	138.63	29.03
9	61.09	144.45	27.79
10	60.41	138.93	28.25
AVERAGE DECELERATION RATE:			**28.29 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	60.55	135.11	29.19
2	60.22	137.24	28.42
3	60.02	135.88	28.52
4	60.27	141.87	27.54
5	61.83	147.35	27.91
6	60.67	143.67	27.56
7	60.13	143.12	27.17
8	60.64	138.59	28.54
9	59.87	135.80	28.39
10	59.33	140.64	26.92
AVERAGE DECELERATION RATE:			**28.02 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.16 ft/s²**

PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**137.5 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) Stage 3

TEST LOCATION: MSP Precision Drive Track	**DATE:** September 13, 2016	**BEGINNING TIME:** 11:54 a.m.

AIR TEMPERATURE: 74° F	**TRACK SURFACE TEMPERATURE:** 93° F

Phase I

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

Stop #	Initial Velocity *(mph)*	Stopping Distance *(feet)*	Deceleration Rate *(ft/s²)*
1	60.19	133.91	29.10
2	60.44	136.42	28.80
3	60.01	141.67	27.34
4	61.19	147.42	27.32
5	59.83	141.91	27.13
6	60.41	137.61	28.52
7	60.18	135.48	28.75
8	60.55	136.94	28.80
9	60.38	132.97	29.49
10	61.41	140.89	28.79
AVERAGE DECELERATION RATE:			**28.40 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	59.18	131.14	28.73
2	60.39	142.17	27.59
3	60.46	135.46	29.03
4	60.64	145.24	27.23
5	60.71	142.48	27.82
6	60.13	137.24	28.34
7	59.93	136.91	28.22
8	60.73	140.55	28.22
9	59.95	138.15	27.98
10	59.70	135.45	28.30
AVERAGE DECELERATION RATE:			**28.15 ft/s²**

Phase III

OVERALL AVERAGE DECELERATION RATE:	**28.28 ft/s²**

PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**136.9 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 DSRP

TEST LOCATION: MSP Precision Drive Track	**DATE:** September 13, 2016	**BEGINNING TIME:** 12:22 p.m.

AIR TEMPERATURE: 75° 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	60.04	138.87	27.92
2	60.52	142.00	27.74
3	59.70	143.64	26.69
4	60.73	142.77	27.79
5	60.70	144.76	27.38
6	60.92	147.68	27.03
7	59.70	143.20	26.77
8	59.58	148.07	25.79
9	60.27	144.02	27.13
10	**Rear brake component failure ended testing		
AVERAGE DECELERATION RATE:			**27.14 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	**Rear brake component failure ended testing		
2			
3			
4			
5			
6			
7			
8			
9			
10			
AVERAGE DECELERATION RATE:			**-**

Phase III

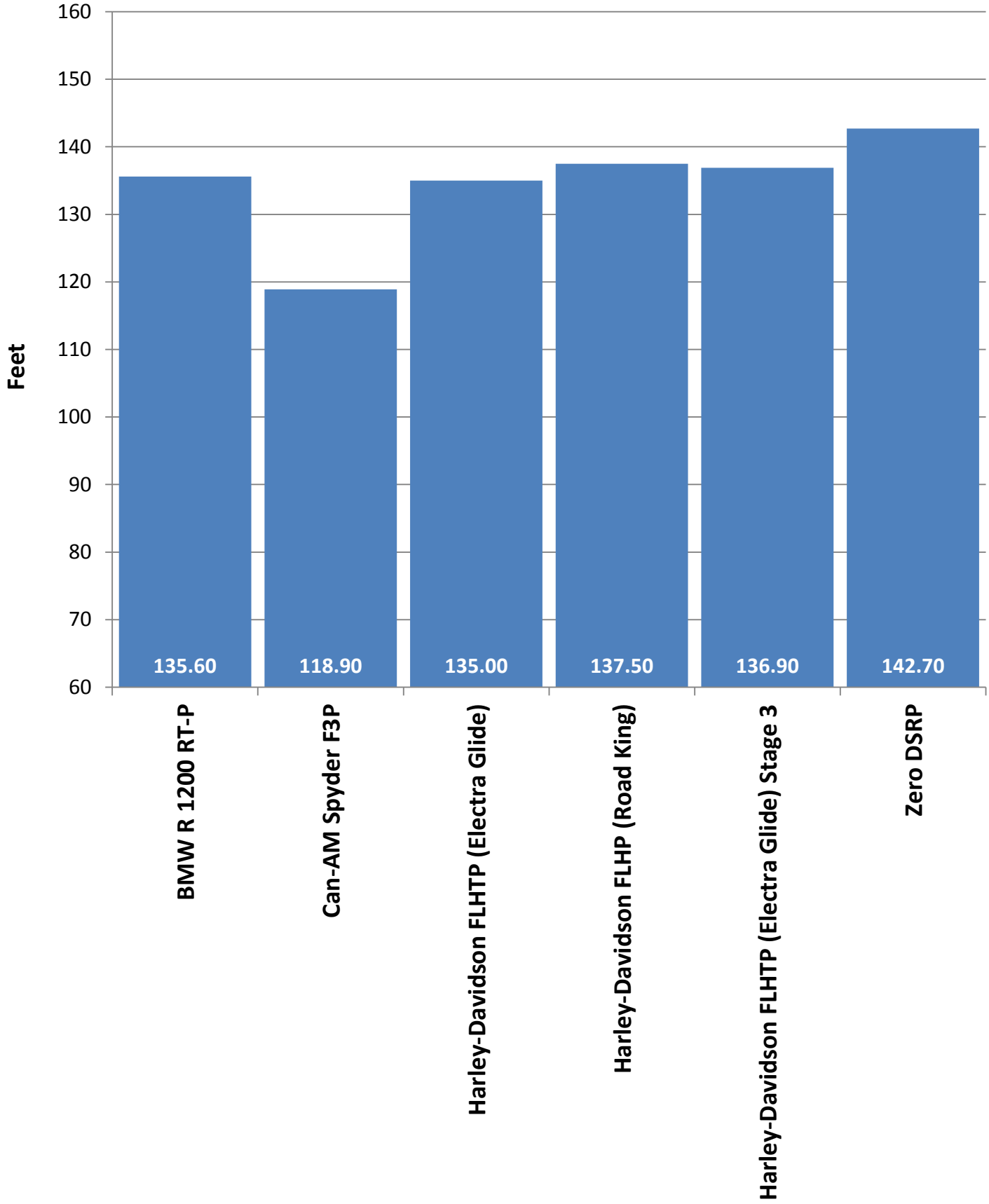
OVERALL AVERAGE DECELERATION RATE:	**27.14 ft/s²**
PROJECTED STOPPING DISTANCE FROM 60.0 mph:	**142.7 feet**

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*

2017 Motorcycle Brake Testing

Projected Stopping Distance



For Your Information

About the National Institute of Justice

NIJ — the research, development, and evaluation agency of the U.S. Department of Justice - is dedicated to improving knowledge and understanding of crime and justice issues through science. NIJ provides objective and independent knowledge and tools to inform the decision-making of the criminal justice community to reduce crime and advance justice, particularly at the state and local levels.

NIJ's pursuit of this mission is guided by the following principles:

- Research can make a difference in individual lives, in the safety of communities and in creating a more effective and fair justice system.
- Government-funded research must adhere to processes of fair and open competition guided by rigorous peer review.
- NIJ's research agenda must respond to the real world needs of victims, communities, and criminal justice professionals.
- NIJ must encourage and support innovative and rigorous research methods that can provide answers to basic research questions as well as practical, applied solutions to crime.
- Partnerships with other agencies and organizations, public and private, are essential to NIJ's success.

The National Institute of Justice is committed to being a transformative force in the criminal justice field by meeting five strategic challenges:

1. **Fostering science-based criminal justice practice** - supporting rigorous scientific research to ensure the safety of families, neighborhoods, and communities.
2. **Translating knowledge to practice** - disseminating rigorous scientific research to criminal justice professionals to advance what works best in preventing and reducing crime.
3. **Advancing technology** - building a more effective, fair and efficient criminal justice system through technology.
4. **Working across** disciplines - connecting the physical, forensic and social sciences to reduce crime and promote justice.
5. **Bolstering the research** infrastructure - supporting young scholars, encouraging researchers from a broad array of disciplines to apply their work to criminal justice, and increasing the availability of research findings and data.
6. **Adopting a global** perspective - understanding crime in its social context within the U.S. and globally.

About the Standards and Testing Program

The NIJ Standards and Testing Program develops and publishes equipment standards that specifically address the needs of law enforcement, corrections, and other criminal justice agencies. The goal is to ensure to the degree possible that equipment is safe, reliable, and performs according to established minimum requirements.

NIJ standards are voluntary standards. Manufacturers are neither required nor mandated to follow them. They are also performance standards. They do not specify a particular solution, but rather define what a potential solution must accomplish.

Even though NIJ standards are not regulatory in nature, they are nevertheless influential because they articulate best practice. They obtain their influence from an agency's consideration of the legal or monetary penalties that may ensue as a consequence of a bad outcome resulting from not adopting a standard.

Having a standard provides the end user with performance information on key equipment characteristics, provides a level of confidence in a product's fitness for use and allows comparison of products based on standardized testing methods and minimum performance requirements.

NIJ standards are an articulation of the criminal justice practitioner's operational needs and associated performance levels with regard to particular tools and technology. They reflect the practical experiences of the community in the field articulated in such a way as to enable testing in a valid and consistently replicable manner.

NIJ also supports testing programs based on the standards.

For more information, please visit the NIJ website at http://www.nij.gov/topics/technology/standards-testing/Pages/welcome.aspx, or JUSTNET, the website of the Justice Technology Information Center, at https://www.justnet.org/compliant/Learn-about-testing.html. JTIC manages the Compliance Testing Program for NIJ>