

POLICE VEHICLE EVALUATION

Model Year 2023



STATE OF MICHIGAN
Department of State Police
and
Department of Technology, Management and Budget

A large, semi-transparent watermark of the Michigan State Police badge is centered on the page. The badge is blue with yellow text and features a central seal with a figure and the motto 'CEREO MEXICO'.

2023 Model Year
Police Vehicle Evaluation Program

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Precision Driving Unit
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PREFACE

The Michigan State Police Vehicle Test Team is pleased to announce the results of the 2023 Model Year Police Vehicle Evaluation. This year we tested thirteen patrol vehicles and three motorcycles. We appreciate your continued support and encouragement. The vehicles evaluated this year included the following:

POLICE VEHICLES

Chevrolet Tahoe 5.3L RWD
Chevrolet Tahoe 5.3L 4WD
Chevrolet Silverado Z7X 4WD
Chevrolet Silverado Z71 4WD
Dodge Charger 5.7L RWD
Dodge Charger 3.6L AWD
Dodge Durango 5.7L AWD
Dodge Durango 3.6L AWD
Ford Police Interceptor Utility 3.0L EcoBoost AWD
Ford Police Interceptor Utility Hybrid AWD
Ford Police Interceptor Utility 3.3L AWD
Ford F150 Police Responder 3.5L EcoBoost
Ford Mustang Mach-E AWD

MOTORCYCLES

BMW R 1250 RT-P
Harley-Davidson FLHTP
Harley- Davidson FLHP



GENERAL INFORMATION

All 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 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.

Motorcycles were tested with equipment installed as provided by their respective manufacturer.

The manufacturers could 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.

Chelsea Proving Grounds - Acceleration, Top Speed, & Braking Tests

Acceleration and Top Speed tests were performed at the Chelsea 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 Chelsea Proving Grounds, utilizing lanes one and two of the straightaway on the eastside of the oval.

We would like to thank Mr. Greg Spicher for the assistance we received from the staff at the Chelsea Proving Grounds.

Grattan Raceway - Vehicle Dynamics Test

Vehicle Dynamics testing was performed at the 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 Chevrolet, Dodge, and Ford Motor Company during testing.

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 and Harley-Davidson during testing. This was the eighteenth year of police motorcycle testing, and we continue to get great feedback on this important component to the testing lineup.

Vehicle Testing History, Pursuit Ratings, and Purchasing Specifications

The Michigan State Police (MSP) began testing patrol cars in the 1950s. At that time, quotations were requested from manufacturers and only the vehicle with the lowest quotation was tested to see if it met our purchasing requirements. Years later, the quotations received from manufacturers were only four dollars apart. At that point, the MSP decided to test all vehicles to select the best vehicle. The equipment used to measure speed and distance has evolved from tape measure to global positioning systems, providing more accurate measurements, making the MSP vehicle testing an internationally recognized resource for law enforcement agencies.

The term pursuit rated vehicle has recently been called into question as no one fully understands what this term represents. The term pursuit capable is more appropriate as there is no sanctioning body, or specific performance criteria, to determine if the vehicle meets a specialized designation. Each vehicle has been modified from a civilian vehicle to perform better under the rigors of police use. These vehicles are engineered to repetitively stop in a shorter distance, accelerate faster, and handle better than the base platform. Modifications to engines, cooling systems, transmissions and shifting parameters, brakes, tires, stability control programming, and other changes may all be included as part of the manufacturers police package.

The manufacturers provide upcoming model year vehicles to both the MSP and Los Angeles County Sheriff's Department to be tested for suitability in their respective operations. Historically, successful results at both test sites have validated the manufacturers' engineering efforts in building a car capable of handling the stress associated with police pursuits. Neither the MSP, nor the Los Angeles County Sheriff's Department, has the authority or credentials to award the term pursuit rated to any vehicle.

The MSP has performance criteria attached to its purchasing specifications. The criteria historically have been that a vehicle must accelerate from 0 – 60 mph in 9.0 seconds, 0 – 80 mph in 14.9 seconds, and 0 – 100 mph in 24.6 seconds. The vehicle must reach 110 mph in 0.92 mile and 120 mph in 1.70 miles. The vehicle must maintain an average deceleration rate of 25.79 ft./sec² while performing twenty 60 – 0 mph full anti-lock brake stops. The vehicle must also successfully complete all 32 laps of the Grattan Raceway dynamics testing without major component failure. Meeting the above criteria does not certify a vehicle as being pursuit rated, rather it justifies a vehicle can perform the job function the MSP requires in a police vehicle. When reading the testing results in this book, it is up to each agency to determine if the vehicle is suitable for the mission of their agency.

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 is 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 goal: a safe, successful testing program that benefits the law enforcement community nationwide and beyond.

Col. Joe Gasper, Director, Michigan Department of State Police
Lt. Col. Dale Hinz, Senior Deputy Director, Field Operations Bureau
Lt. Col. Chris Kelenske, Senior Deputy Director, Field Support Bureau
Lt. Col. Michael Krumm, Senior Deputy Director, Professional Development Bureau
Maj. Joseph Brodeur, Senior Management Executive, Field Operations Bureau
Maj. Ryan Pennell, Senior Management Executive, Field Operations Bureau
Maj. Beth Clark, Senior Management Executive, Field Support Bureau
Dr. Juli Liebler, Senior Management Executive, Professional Development Bureau
Capt. James Grady, Commander, Training Division

Personnel from the Michigan Department of Technology, Management and Budget
Vehicle and Travel Services

Mr. Greg Spicher and personnel from Chelsea Proving Grounds
Mr. Sam Faasen and personnel from Grattan Raceway Park

Photographs by Ms. Kim Dowling, Michigan State Police, and
Ret. Tpr. Daniel Obarski, Blue Diamond Photography

Vehicle Evaluation book prepared by Ms. Ashly O'Brien, Michigan State Police, Precision Driving Unit

The Michigan State Police Precision Driving Unit would like to extend a very special thank you to Chevrolet, Dodge, and Ford Motor Company for their hard work in building and preparing the test vehicles. 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 contribute to the law enforcement community.

Michigan State Police, Vehicle Test Team:

Team Photo

Back Row: Ret. Lt. Mike McCarthy, Tpr. Jeff Mercer, Tpr. Ryan Davis, Sgt. Matt Rogers, and Ret. Sgt. David "Doc" Halliday
Front Row: Tpr. Eddie Ricklefs, Sgt. John Looney, Ms. Ashly O'Brien, Lt. Nick Darlington, Sgt. Pat Agema, and Ms. Jackie Fitzsimmons



TEST EQUIPMENT

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

Racelogic USA 27240 Haggerty Rd. Suite E17, Farmington Hills, MI 48331

- VBox 3i Data Collection System

Schuberth Helmets Stegelitzer Straße 12 39126 Magdeburg Deutschland

- Motorcycle Helmet- C3 Pro

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- ST5 GT Carbon Fiber

Simpson Race Products 328 FM 306, New Braunfels, TX 78130

- Hybrid S Head and Neck Restraint

Motorola Solutions 1303 East Algonquin Road, Schaumburg, IL 60196

- Mag One BPR 40 Two-Way Radio

The image features a large, semi-transparent blue and yellow Michigan State Police badge in the background. The badge is shield-shaped with a yellow border and a yellow star on the left and right sides. The word "MICHIGAN" is written in yellow across the top, and "STATE POLICE" is written in yellow across the bottom. In the center is a circular seal with a figure and the word "CIRCUMSPICE" below it.

**VEHICLE DESCRIPTIONS
AND
PHOTOGRAPHS**

Chevrolet Tahoe 5.3L RWD



MAKE & MODEL	2023 2WD Chevrolet Police Tahoe
SALES CODE	9C1
POWERTRAIN INFORMATION	
CUBIC INCHES	325
LITERS	5.3
DRIVE SYSTEM	Rear Wheel Drive
HORSEPOWER	355 HP
TORQUE	383 ft./lbs.
ALTERNATOR	250 AMP
BATTERY	900/760 CCA
TRANSMISSION	10 Speed
AXLE RATIO	3.23
TURNING RADIUS	19.5 ft.
TIRE SIZE, LOAD & SPEED RATING	275/55 R-20,
GROUND CLEARANCE, MINIMUM	7.1 inches
BRAKE SYSTEM	eBoost ABS disc/disc
FUEL CAPACITY	24 Gallons/90.85 Liters
MANUFACTURER LIMITED TOP SPEED	130 mph
GENERAL MEASUREMENTS	
WHEELBASE	120.9 inches
LENGTH	210.7 inches
CURB WEIGHT	5717 lbs.
HEIGHT	75.8 inches
INTERIOR VOLUME	
FRONT	64.1 cu. ft.
REAR	59.2 cu. ft.
COMBINED	123.2 cu. ft.
TRUNK	70.3 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1600 lbs.
EPA MILEAGE EST. (MPG)	
CITY	15
HIGHWAY	19
COMBINED	16

MANUFACTURER VEHICLE HIGHLIGHTS

The MY23 police Tahoe 2WD and 4WD has the following new enhancements.

- Standard front park assist and 5J0 orderable option to deactivate the front park assist for push bumper installs.
- Optional LED Strobe front and rear lamp packages (SEO 6J8, 6J9, 6JE, 6JG) available 23MY interim. Standard Flash Pattern with sync circuits. Compatible with most aftermarket lighting controllers.
- 6J8 White DS/White PS
- 6J9 Red DS/ Red PS
- 6JE Blue DS/Blue PS
- 6JG Red DS /Blue PS

Chevrolet Tahoe

5.3L 4WD



MAKE & MODEL	2023 4WD Chevrolet Police Tahoe
SALES CODE	9C1
POWERTRAIN INFORMATION	
CUBIC INCHES	325
LITERS	5.3
DRIVE SYSTEM	Four Wheel Drive
HORSEPOWER	355 HP
TORQUE	383 ft./lbs.
ALTERNATOR	250 AMP
BATTERY	900/760 CCA
TRANSMISSION	10 Speed
AXLE RATIO	3.23
TURNING RADIUS	19.5 ft.
TIRE SIZE, LOAD & SPEED RATING	275/55 R-20,
GROUND CLEARANCE, MINIMUM	7.1 inches
BRAKE SYSTEM	eBoost ABS disc/disc
FUEL CAPACITY	24 Gallons/90.85 Liters
MANUFACTURER LIMITED TOP SPEED	124 mph
GENERAL MEASUREMENTS	
WHEELBASE	120.9 inches
LENGTH	210.7 inches
CURB WEIGHT	5730 lbs.
HEIGHT	75.9 inches
INTERIOR VOLUME	
FRONT	64.1 cu. ft.
REAR	59.2 cu. ft.
COMBINED	123.2 cu. ft.
TRUNK	70.3 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1600 lbs.
EPA MILEAGE EST. (MPG)	
CITY	14
HIGHWAY	18
COMBINED	16

MANUFACTURER VEHICLE HIGHLIGHTS

The MY23 police Tahoe 2WD and 4WD has the following new enhancements.

- Standard front park assist and 5J0 orderable option to deactivate the front park assist for push bumper installs.
- Optional LED Strobe front and rear lamp packages (SEO 6J8, 6J9, 6JE, 6JG) available 23MY interim. Standard Flash Pattern with sync circuits. Compatible with most aftermarket lighting controllers.
- 6J8 White DS/White PS
- 6J9 Red DS/ Red PS
- 6JE Blue DS/Blue PS
- 6JG Red DS /Blue PS

Chevrolet Silverado Z7X 4WD



MAKE & MODEL	2023 4WD Chevrolet Police Silverado Z7X (2" Lifted Chassis)
SALES CODE	9C1
POWERTRAIN INFORMATION	
CUBIC INCHES	325
LITERS	5.3
DRIVE SYSTEM	Four Wheel Drive
HORSEPOWER	355 HP
TORQUE	383 ft./lbs.
ALTERNATOR	220 AMP
BATTERY	730 CCA AGM
TRANSMISSION	10 Speed column shift and 2 speed transfer case with Auto mode
AXLE RATIO	3.23 with standard Traction Lock
TURNING RADIUS	23.2 ft.
TIRE SIZE, LOAD & SPEED RATING	P275/60 R-20 AT, S Speed Rating
GROUND CLEARANCE, MINIMUM	11.4 inches
BRAKE SYSTEM	eBoost ABS disc/disc
FUEL CAPACITY	24 Gallons/90.85 Liters
MANUFACTURER LIMITED TOP SPEED	112 mph
GENERAL MEASUREMENTS	
WHEELBASE	147.4 inches
LENGTH	231.7 inches
CURB WEIGHT	5010 lbs.
HEIGHT	77.6 inches
INTERIOR VOLUME	
FRONT	64.2 cu. ft.
REAR	65.6 cu. ft.
COMBINED	129.8 cu. ft.
TRUNK	62.9 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1850 lbs.
EPA MILEAGE EST. (MPG)	
CITY	14
HIGHWAY	17
COMBINED	15

MANUFACTURER VEHICLE HIGHLIGHTS

- The MY23 police Silverado 4WD has the following new enhancements.
- Standard Z71 suspension with optional Z7X 2-inch chassis lift
 - Brembo 6 piston front brake calipers, 16" diameter front rotors and Lo Met Linings
 - 20 x 9" Steel Wheel and matching spare tire/wheel with TPM
 - Underbody Skid plates
 - Cruise control
 - Certified Speedo
 - Console and Cargo box 110V receptacles (KI4)
 - Electrical calibrations:
 - Wig wag flashers (front and rear)
 - Protected Park
 - Radio mute
 - Surveillance mode
 - Horn Circuit
 - OPTIONAL EQUIPMENT
 - Spot Lamps Driver/Passenger or Driver Only (LED or Halogen)
 - Front Row Center 20% Seat/Folding Console Delete (5Y1)
 - Fleet Key (6E2/6E8)
 - 4 Additional FOB's (AMF)
 - 2nd row inside door handles disable (6N6)
 - Vinyl 2nd Row Seat (5T5)
 - 3 SEO Paint colors: Woodland Green, Wheatland Yellow, Tangier Orange

Chevrolet Silverado Z71 4WD



MAKE & MODEL	2023 4WD Chevrolet Police Silverado Z71
SALES CODE	9C1
POWERTRAIN INFORMATION	
CUBIC INCHES	325
LITERS	5.3
DRIVE SYSTEM	Four Wheel Drive
HORSEPOWER	355 HP
TORQUE	383 ft./lbs.
ALTERNATOR	220 AMP
BATTERY	730 CCA AGM
TRANSMISSION	10 Speed column shift and 2 speed transfer case with Auto mode
AXLE RATIO	3.23 with standard Traction Lock
TURNING RADIUS	23.2 ft.
TIRE SIZE, LOAD & SPEED RATING	P275/60 R-20 AT, S Speed Rating
GROUND CLEARANCE, MINIMUM	9.2 inches
BRAKE SYSTEM	eBoost ABS disc/disc
FUEL CAPACITY	24 Gallons/90.85 Liters
MANUFACTURER LIMITED TOP SPEED	112 mph
GENERAL MEASUREMENTS	
WHEELBASE	147.4 inches
LENGTH	231.7 inches
CURB WEIGHT	5010 lbs.
HEIGHT	75.5 inches
INTERIOR VOLUME	
FRONT	64.2 cu. ft.
REAR	65.6 cu. ft.
COMBINED	129.8 cu. ft.
TRUNK	62.9 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1850 lbs.
EPA MILEAGE EST. (MPG)	
CITY	14
HIGHWAY	17
COMBINED	15

MANUFACTURER VEHICLE HIGHLIGHTS

- The MY23 police Silverado 4WD has the following new enhancements.
- Standard Z71 suspension with optional Z7X 2-inch chassis lift
 - Brembo 6 piston front brake calipers, 16" diameter front rotors and Lo Met Linings
 - 20 x 9" Steel Wheel and matching spare tire/wheel with TPM
 - Underbody Skid plates
 - Cruise control
 - Certified Speedo
 - Console and Cargo box 110V receptacles (KI4)
 - Electrical calibrations:
 - Wig wag flashers (front and rear)
 - Protected Park
 - Radio mute
 - Surveillance mode
 - Horn Circuit
 - OPTIONAL EQUIPMENT
 - Spot Lamps Driver/Passenger or Driver Only (LED or Halogen)
 - Front Row Center 20% Seat/Folding Console Delete (5Y1)
 - Fleet Key (6E2/6E8)
 - 4 Additional FOB's (AMF)
 - 2nd row inside door handles disable (6N6)
 - Vinyl 2nd Row Seat (5T5)
 - 3 SEO Paint colors: Woodland Green, Wheatland Yellow, Tangier Orange

Dodge Charger 5.7L RWD



MAKE & MODEL	2023 Dodge Charger 5.7L RWD
SALES CODE	26A
POWERTRAIN INFORMATION	
CUBIC INCHES	345
LITERS	5.7L
DRIVE SYSTEM	Rear Wheel Drive
HORSEPOWER	370 HP
TORQUE	395 ft./lbs.
ALTERNATOR	220 AMP
BATTERY	800 CCA
TRANSMISSION	TorqueFlite Automatic, 8-Speed Overdrive 8HP70
AXLE RATIO	2.62
TURNING RADIUS	37.7 ft.
TIRE SIZE, LOAD & SPEED RATING	P245/55/R18, 103V, Goodyear Eagle RSA
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, 4 Channel Anti-Lock
FUEL CAPACITY	18.5 Gallons/70.0 Liters
MANUFACTURER LIMITED TOP SPEED	140 MPH
GENERAL MEASUREMENTS	
WHEELBASE	120.2 inches
LENGTH	198.4 inches
CURB WEIGHT	4292 lbs.
HEIGHT	58.4 inches
INTERIOR VOLUME	
FRONT	55.6 cu. ft.
REAR	49.2 cu. ft.
COMBINED	104.7 cu. ft.
TRUNK	16.5 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1180 lbs.
EPA MILEAGE EST. (MPG)	
CITY	16
HIGHWAY	25
COMBINED	19
MANUFACTURER VEHICLE HIGHLIGHTS	
<p>The 2022 Dodge Charger Pursuit rear-wheel-drive (RWD) comes standard with the legendary 5.7L HEMI® V-8 engine and the TorqueFlite eight-speed automatic transmission delivering 370 horsepower and an astonishing 395 lb.-ft of torque. The 5.7L HEMI® V-8 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.</p> <p>Additional standard features include a GVWR of 5,500 lbs. which delivers up to 1,180 lbs. payload, as well as standard Apple CarPlay and Android Auto to facilitate driver handsfree communication. A 7" touchscreen is standard which provides maximum rear camera visibility and standard LED headlamps provide maximum visibility down the road.</p>	

Dodge Charger 3.6L AWD



MAKE & MODEL	2023 Dodge Charger 3.6L AWD
SALES CODE	28A
POWERTRAIN INFORMATION	
CUBIC INCHES	220
LITERS	3.6L
DRIVE SYSTEM	All Wheel Drive
HORSEPOWER	300 HP
TORQUE	260 ft./lbs.
ALTERNATOR	220 AMP
BATTERY	800 CCA
TRANSMISSION	TorqueFlite Automatic, 8-Speed Overdrive 850RE
AXLE RATIO	3.08
TURNING RADIUS	38.7 ft.
TIRE SIZE, LOAD & SPEED RATING	P225/60/R18, 99W, Goodyear Eagle RSA
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, 4 Channel Anti-Lock
FUEL CAPACITY	18.5 Gallons/70.0 Liters
MANUFACTURER LIMITED TOP SPEED	140 MPH
GENERAL MEASUREMENTS	
WHEELBASE	120.2 inches
LENGTH	198.4 inches
CURB WEIGHT	4217 lbs.
HEIGHT	58.4 inches
INTERIOR VOLUME	
FRONT	55.6 cu. ft.
REAR	49.2 cu. ft.
COMBINED	104.7 cu. ft.
TRUNK	16.5 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1280 lbs.
EPA MILEAGE EST. (MPG)	
CITY	18
HIGHWAY	26
COMBINED	21

MANUFACTURER VEHICLE HIGHLIGHTS

For the 2023 model year, the Dodge Charger Pursuit is offered in a V-6 all-wheel-drive (AWD) configuration that delivers 300 horsepower and 264 lb.-ft. of torque. This equates to maximum tactical performance, all-weather traction, and fuel-efficiency. It is powered by the award-winning 3.6-liter Pentastar® V-6 and mated to the standard TorqueFlite eight-speed automatic transmission.

The 2023 Dodge Charger Pursuit advanced all-wheel-drive (AWD) system transitions seamlessly from RWD to AWD. This segment exclusive active transfer case and front-axle disconnect system monitor and adapt to environmental/road conditions, vehicle mode and driver habits. This system improves traction, acceleration, and cornering balance.

Additional standard features include a GVWR of 5,500 lbs. which delivers up to 1,280 lbs. payload, as well as standard Apple CarPlay and Android Auto to facilitate driver handsfree communication. A seven-inch touchscreen is standard which provides maximum rear camera visibility and standard LED headlamps provide maximum visibility down the road.

Dodge Durango 5.7L AWD



MAKE & MODEL	2023 Dodge Durango 5.7L AWD
SALES CODE	22Z
POWERTRAIN INFORMATION	
CUBIC INCHES	345
LITERS	5.7L
DRIVE SYSTEM	All Wheel Drive
HORSEPOWER	360 HP
TORQUE	390 ft./lbs.
ALTERNATOR	220 AMP
BATTERY	800 CCA
TRANSMISSION	TorqueFlite Automatic, 8-Speed Overdrive 8HP70
AXLE RATIO	3.09
TURNING RADIUS	41.0 ft.
TIRE SIZE, LOAD & SPEED RATING	255/60R18 108V Firestone Firehawk Pursuit
GROUND CLEARANCE, MINIMUM	8.1 inches
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, Anti-Lock
FUEL CAPACITY	24.6 Gallons/93.1 Liters
MANUFACTURER LIMITED TOP SPEED	130 MPH
GENERAL MEASUREMENTS	
WHEELBASE	119.8 inches
LENGTH	201.2 inches
CURB WEIGHT	5214 lbs.
HEIGHT	70.9 inches
INTERIOR VOLUME	
FRONT	54.4 cu. ft.
REAR	51.2 cu. ft.
COMBINED	105.6 cu. ft.
TRUNK	43.3 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1700 lbs.
EPA MILEAGE EST. (MPG)	
CITY	14
HIGHWAY	22
COMBINED	17

MANUFACTURER VEHICLE HIGHLIGHTS

The 2023 Dodge Durango Pursuit comes equipped with the legendary 5.7-liter HEMI® V8 engine paired to the fuel-friendly 8-speed transmission. It comes with a full list of standard features such as an IP mounted shifter, black steel wheels with chrome center cap, vinyl flooring, police specific front seats, and the invaluable automatic tri-zone temperature control to keep K9 units comfortable. An 8.4-inch touchscreen is standard which provides maximum rear camera visibility.

The demands of police work require a vehicle with exceptional maneuverability, power and fuel economy, and Dodge Durango Pursuit is ready for duty. This SUV was built to carry with 84 cu.-ft. of cargo volume and a towing capacity up to 7,200 lbs. It all adds up to complete capability for the toughest assignments — the foundation of Durango Pursuit.

Dodge Durango 3.6L AWD



MAKE & MODEL SALES CODE	2023 Dodge Durango 3.6L AWD 2BZ
POWERTRAIN INFORMATION	
CUBIC INCHES LITERS DRIVE SYSTEM HORSEPOWER TORQUE ALTERNATOR BATTERY TRANSMISSION AXLE RATIO TURNING RADIUS TIRE SIZE, LOAD & SPEED RATING GROUND CLEARANCE, MINIMUM BRAKE SYSTEM FUEL CAPACITY MANUFACTURER LIMITED TOP SPEED	220 3.6L All Wheel Drive 293 HP 260 ft./lbs. 220 AMP 650 CCA TorqueFlite Automatic, 8-Speed Overdrive 850RE 3.45 41.0 ft. 255/60R18 108V Firestone Firehawk Pursuit 8.1 inches Power, Dual Piston Front/Single Piston Rear, Anti-Lock 24.6 Gallons/93.1 Liters 128 MPH
GENERAL MEASUREMENTS	
WHEELBASE LENGTH CURB WEIGHT HEIGHT	119.8 inches 201.2 inches 4929 lbs. 70.9 inches
INTERIOR VOLUME	
FRONT REAR COMBINED TRUNK MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	54.4 cu. ft. 51.2 cu. ft. 105.6 cu. ft. 43.3 cu. ft. 1550 lbs.
EPA MILEAGE EST. (MPG)	
CITY HIGHWAY COMBINED	18 25 21

MANUFACTURER VEHICLE HIGHLIGHTS

The 2023 Dodge Durango Pursuit comes equipped with the award winning 3.6-liter Pentastar V6 engine paired to the fuel-friendly 8-speed transmission. It comes with a full list of standard features such as an IP mounted shifter, black steel wheels with chrome center cap, vinyl flooring, police specific front seats, and the invaluable automatic tri-zone temperature control to keep K9 units comfortable. An 8.4-inch touchscreen is standard which provides maximum rear camera visibility.

The demands of police work require a vehicle with exceptional maneuverability, power and fuel economy, and Dodge Durango Pursuit is ready for duty. This SUV was built to carry with 84 cu.-ft. of cargo volume and a towing capacity up to 6,200 lbs. It all adds up to complete capability for the toughest assignments — the foundation of Durango Pursuit.

Ford Police Interceptor Utility 3.0L EcoBoost AWD



MAKE & MODEL	2023 Police Interceptor Utility EcoBoost AWD
SALES CODE	K8A, 99C
POWERTRAIN INFORMATION	
CUBIC INCHES	183 CI
LITERS	3.0L Hybrid
DRIVE SYSTEM	All Wheel Drive
HORSEPOWER	400 HP
TORQUE	415 ft./lbs.
ALTERNATOR	250 AMP
BATTERY	730 CCA
TRANSMISSION	10 Speed
AXLE RATIO	3.31:1
TURNING RADIUS	40.4 ft.
TIRE SIZE, LOAD & SPEED RATING	255/60R18 108V
GROUND CLEARANCE, MINIMUM	7.2 inches
BRAKE SYSTEM	Power- dual piston calipers front, single piston calipers rear, 4 circuit ABS
FUEL CAPACITY	21.4 Gallons/81.0 Liters
MANUFACTURER LIMITED TOP SPEED	148 mph
GENERAL MEASUREMENTS	
WHEELBASE	119.1 inches
LENGTH	198.8 inches
CURB WEIGHT	4848 lbs.
HEIGHT	69.0 inches
INTERIOR VOLUME	
FRONT	59.7 cu. ft.
REAR	58.4 cu. ft.
COMBINED	118.0 cu. ft.
TRUNK	52 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1670 lbs.
EPA MILEAGE EST. (MPG)	
CITY	17
HIGHWAY	22
COMBINED	19

MANUFACTURER VEHICLE HIGHLIGHTS

NEW FEATURES & CHANGES:

- The Ford Police Interceptor® Utility comes with standard Hybrid AWD
- Hybrid and AWD are ideal for law enforcement, due to optimal performance and significant potential fuel savings
- Optional 3.3L Flex Fuel AWD and 3.0L EcoBoost AWD also available

SAFETY:

- Heated Sanitization Solution. This innovative solution temporarily raises internal vehicle temperatures over 133 degrees Fahrenheit for at least 15 minutes – long enough to help disinfect touchpoints to reduce viral concentration (including COVID-19) inside by greater than 99% on interior surfaces – a way to protect officers working in frontline conditions.²
- Ford Police Interceptors are the only vehicles in the world designed and engineered for the 75-mph rear-impact crash test
- Optional factory-installed Police Perimeter Alert monitors approximately 270° and secures vehicle if threatening motion detected
- Optional Automatic Emergency Braking features unique temporary disable switch for Law Enforcement
- Optional Level III+ & IV+ NIJ Ballistic Panels – includes additional LAPD special threat rounds
- Optional factory-installed 12.1" Integrated Computer Screen allows laptops to be stored out of the way, reducing cabin clutter

DURABILITY:

- Enhanced police durability-cycle tested, proven real-world durability results

PERFORMANCE:

- The 3.0L EcoBoost AWD provides increased horsepower, torque, acceleration, and top speed vs. 3.5L EcoBoost AWD, and had the fastest 0-60 and 0-100 acceleration times of all sedan and utility vehicles tested by MSP in 2020CY
- Standard AWD provides optimum handling in various road conditions – dry, ice/snow, wet/rain, gravel, etc.

1. The 2020CY is based on IHS Markit Registration data as of May 2020 2. Ambient temperature, installation of partitions or other upfit equipment may impede temperatures from reaching the recommended threshold.

Ford Police Interceptor Utility 3.3L Hybrid AWD



MAKE & MODEL SALES CODE	2023 Police Interceptor Utility Hybrid AWD K8A, 99W
POWERTRAIN INFORMATION	
CUBIC INCHES LITERS DRIVE SYSTEM HORSEPOWER TORQUE ALTERNATOR BATTERY TRANSMISSION AXLE RATIO TURNING RADIUS TIRE SIZE, LOAD & SPEED RATING GROUND CLEARANCE, MINIMUM BRAKE SYSTEM FUEL CAPACITY MANUFACTURER LIMITED TOP SPEED	201 CI 3.3L Hybrid All Wheel Drive 318 combined HP 322 combined ft./lbs. DC/DC Converter: 220 AMP 800 CCA 10 Speed 3.73:1 40.4 ft. 255/60R18 108V 7.4 inches Power- dual piston calipers front, single piston calipers rear, 4 circuit ABS 19.0 Gallons/ 72.0 Liters 136 mph
GENERAL MEASUREMENTS	
WHEELBASE LENGTH CURB WEIGHT HEIGHT	119.1 inches 198.8 inches 5303 lbs. 69.2 inches
INTERIOR VOLUME	
FRONT REAR COMBINED TRUNK MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	59.7 cu. ft. 58.4 cu. ft. 118.0 cu. ft. 52 cu. ft. 1670 lbs.
EPA MILEAGE EST. (MPG)	
CITY HIGHWAY COMBINED	23 24 24

MANUFACTURER VEHICLE HIGHLIGHTS

NEW FEATURES & CHANGES:

- The Ford Police Interceptor® Utility comes with standard Hybrid AWD
- Hybrid and AWD are ideal for law enforcement, due to optimal performance and significant potential fuel savings
- Potential fuel savings of over \$3,400 per year, per vehicle, at \$2.75/gallon; see www.fordpoliceinterceptor.com for details

SAFETY:

- Heated Sanitization Solution. This innovative solution temporarily raises internal vehicle temperatures over 133 degrees Fahrenheit for at least 15 minutes – long enough to help disinfect touchpoints to reduce viral concentration (including COVID-19) inside by greater than 99% on interior surfaces – a way to protect officers working in frontline conditions.²
- Ford Police Interceptors are the only vehicles in the world designed and engineered for the 75-mph rear-impact crash test
- Optional factory-installed Police Perimeter Alert monitors approximately 270° and secures vehicle if threatening motion detected
- Optional Automatic Emergency Braking features unique temporary disable switch for Law Enforcement
- Optional Level III+ & IV+ NIJ Ballistic Panels – includes additional LAPD special threat rounds
- Optional factory-installed 12.1" Integrated Computer Screen allows laptops to be stored out of the way, reducing cabin clutter

DURABILITY:

- Enhanced police durability-cycle tested, proven real-world durability results

PERFORMANCE:

- Standard Hybrid powertrain provides increased horsepower, torque, acceleration, and top speed vs. 3.7L AWD, and had the fastest 0-60mph, 0-80mph, lap, average lap and highest top speed of utility vehicles tested by MSP in 2020CY²
- Standard AWD provides optimum handling in various road conditions – dry, ice/snow, wet/rain, gravel, etc.

1. The 2020CY is based on IHS Markit Registration data as of May 2020 2. Ambient temperature, installation of partitions or other upfit equipment may impede temperatures from reaching the recommended threshold 3. Excludes Ford Police Interceptor Utility 3.0L EcoBoost

Ford Police Interceptor Utility 3.3L AWD



MAKE & MODEL	2023 Police Interceptor Utility 3.3L AWD
SALES CODE	K8A, 99B
POWERTRAIN INFORMATION	
CUBIC INCHES	201 CI
LITERS	3.3L
DRIVE SYSTEM	All Wheel Drive
HORSEPOWER	285 HP
TORQUE	260 ft./lbs.
ALTERNATOR	250 AMP
BATTERY	730 CCA
TRANSMISSION	10 Speed
AXLE RATIO	3.73:1
TURNING RADIUS	40.4 ft.
TIRE SIZE, LOAD & SPEED RATING	255/60R18 108V
GROUND CLEARANCE, MINIMUM	7.6 inches
BRAKE SYSTEM	Power- dual piston calipers front, single piston calipers rear, 4 circuit ABS
FUEL CAPACITY	21.4 Gallons/81.0 Liters
MANUFACTURER LIMITED TOP SPEED	136 mph
GENERAL MEASUREMENTS	
WHEELBASE	119.1 inches
LENGTH	198.8 inches
CURB WEIGHT	4755 lbs.
HEIGHT	69.3 inches
INTERIOR VOLUME	
FRONT	59.7 cu. ft.
REAR	58.4 cu. ft.
COMBINED	118.0 cu. ft.
TRUNK	52.0 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1670 lbs.
EPA MILEAGE EST. (MPG)	
CITY	17
HIGHWAY	23
COMBINED	19

MANUFACTURER VEHICLE HIGHLIGHTS

NEW FEATURES & CHANGES:

- The Ford Police Interceptor® Utility comes with standard Hybrid AWD
- Hybrid and AWD are ideal for law enforcement, due to optimal performance and significant potential fuel savings
- Optional 3.3L Flex Fuel AWD and 3.0L EcoBoost AWD also available

SAFETY:

- Heated Sanitization Solution. This innovative solution temporarily raises internal vehicle temperatures over 133 degrees Fahrenheit for at least 15 minutes – long enough to help disinfect touchpoints to reduce viral concentration (including COVID-19) inside by greater than 99% on interior surfaces – a way to protect officers working in frontline conditions.²
- Ford Police Interceptors are the only vehicles in the world designed and engineered for the 75-mph rear-impact crash test
- Optional factory-installed Police Perimeter Alert monitors approximately 270° and secures vehicle if threatening motion detected
- Optional Automatic Emergency Braking features unique temporary disable switch for Law Enforcement
- Optional Level III+ & IV+ NIJ Ballistic Panels – includes additional LAPD special threat rounds
- Optional factory-installed 12.1" Integrated Computer Screen allows laptops to be stored out of the way, reducing cabin clutter

DURABILITY:

- Enhanced police durability-cycle tested, proven real-world durability results

PERFORMANCE:

- Standard Hybrid powertrain provides increased horsepower, torque, acceleration and top speed vs. 3.7L AWD
- Standard AWD provides optimum handling in various road conditions – dry, ice/snow, wet/rain, gravel, etc.

1. The 2020CY is based on IHS Markit Registration data as of May 2020

2. Ambient temperature, installation of partitions or other upfit equipment may impede temperatures from reaching the recommended threshold.

Ford F150 Police Responder 3.5L EcoBoost 4WD



MAKE & MODEL SALES CODE	2023 F-150 Police Responder 3.5L EcoBoost W1P
POWERTRAIN INFORMATION	
CUBIC INCHES LITERS DRIVE SYSTEM HORSEPOWER TORQUE ALTERNATOR BATTERY TRANSMISSION AXLE RATIO TURNING RADIUS TIRE SIZE, LOAD & SPEED RATING GROUND CLEARANCE, MINIMUM BRAKE SYSTEM FUEL CAPACITY MANUFACTURER LIMITED TOP SPEED	213 3.5L Front Wheel Drive 400 HP 500 ft./lbs. 240 AMP 800 CCA 10-Speed SelectShift Automatic 3.31 47.8 ft. LT265/70R18 113H 9.4 inches 4-wheel vented disc ABS with electronically controlled brake boost 26 Gallons/98 Liters 120 mph
GENERAL MEASUREMENTS	
WHEELBASE LENGTH CURB WEIGHT HEIGHT	145.4 inches 231.7 inches 5016 lbs. 77.2 inches
INTERIOR VOLUME	
FRONT REAR COMBINED TRUNK MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	79.9 cu. ft. 52.0 cu. ft. 131.9 cu. ft. 52.8 cu. ft. 2030 lbs.
EPA MILEAGE EST. (MPG)	
CITY HIGHWAY COMBINED	16 20 18

MANUFACTURER VEHICLE HIGHLIGHTS

NEW FEATURES:

The 2023 Ford F-150 Police Responder® continues to be the only pursuit-rated pickup truck on the market and combines on-road pursuit performance with Built Ford Tough off-road capability. The F-150 Police Responder provides a 120mph top speed and offers a torque-on-demand 4x4 transfer case with a "4-Auto" mode that features "set it and forget it" capability. Optional Police Engine Idle feature permits officers to quickly remove the key from the ignition and exit the vehicle, while allowing the vehicle to remain securely idling to support lights, sirens, and other on-board equipment.

SAFETY:

- Standard built-in steel intrusion plates in front seat backs
- Rear View Camera with Dynamic Hitch Assist
- Available Pre-Collision Assist with Automatic Emergency Braking (includes Law Enforcement temporary disable switch)
- Available BLIS (Blind Spot Information System) with Cross-traffic Alert

DURABILITY:

- Standard Off-Road package featuring severe duty shocks, underbody skid plates and electronic locking rear axle
- Severe duty brake pads and brake calipers
- Police-grade heavy-duty cloth front seats

PERFORMANCE:

- Standard 3.5L EcoBoost® engine generating 400 horsepower and 500 lb.-ft of torque
- Improved 120mph top speed
- Most payload (2,030 lbs.), standard towing (7,000 lbs.) and optional towing (11,200 lbs.) of any pursuit-rated police vehicle

Ford Mustang Mach-E AWD



MAKE & MODEL	2023 Ford Mustang Mach-E AWD
SALES CODE	K4S
POWERTRAIN INFORMATION	
CUBIC INCHES	N/A
LITERS	N/A
DRIVE SYSTEM	All Wheel Drive
HORSEPOWER	480 HP
TORQUE	600 ft./lbs.
ALTERNATOR	220 AMP
BATTERY	380 CCA
TRANSMISSION	Single Speed Direct Drive
AXLE RATIO	9.05
TURNING RADIUS	39.7 ft.
TIRE SIZE, LOAD & SPEED RATING	245/45R20 103H
GROUND CLEARANCE, MINIMUM	5.7 inches
BRAKE SYSTEM	Power, 4 piston monoblock front, 2 piston rear, 4 circuit ABS
FUEL CAPACITY	N/A Gallons/ N/A Liters
MANUFACTURER LIMITED TOP SPEED	124 mph
GENERAL MEASUREMENTS	
WHEELBASE	117 inches
LENGTH	186 inches
CURB WEIGHT	4920 lbs.
HEIGHT	63 inches
INTERIOR VOLUME	
FRONT	54.0 cu. ft.
REAR	47.0 cu. ft.
COMBINED	101.1 cu. ft.
TRUNK	29.7 cu. ft.
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	978 lbs.
EPA MILEAGE EST. (MPG)	
CITY	90
HIGHWAY	77
COMBINED	84 MPGe

MANUFACTURER VEHICLE HIGHLIGHTS

- 270 EPA-estimated Miles of Range
- eAWD (electric all-wheel drive)
- 88kWh Usable Capacity Extended Range High-Voltage Battery
- Sport-Style Front Seats with ActiveXTM Seating Material
- Ford Co-Pilot360 2.0
- Auto High-Beam Headlamps
- BLIS® (Blind Spot Information System) with Cross-Traffic Alert
- Lane-Keeping System
- Pre-Collision Assist with Automatic Emergency Braking (AEB)
- Post-Collision Braking
- Rear View Camera
- Reverse Brake Assist
- Reverse Sensing System
- Front Trunk Volume 4.7 cu. ft.

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 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, except for 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

**GRATTAN RACEWAY
2023 MODEL YEAR VEHICLE DYNAMICS SCHEDULE
SEPTEMBER 19, 2022**

	DARLINGTON	AGEMA	LOONEY	MERCER
9 a.m.	Dodge Durango 3.6L AWD	Ford Mustang Mach-E AWD	Chevrolet Silverado Z7X 4WD	Chevrolet Silverado Z71 4WD
9:30 a.m.	Pass	Ford Police Interceptor Utility 3.3L AWD	Dodge Durango 5.7L AWD	Chevrolet Tahoe 5.3L RWD
10 a.m.	Ford Police Interceptor Utility 3.3L Hybrid AWD	Pass	Chevrolet Tahoe 5.3L 4WD	Ford F150 3.5L EcoBoost 4WD
10:30 a.m.	Ford Utility 3.0L EcoBoost AWD	Dodge Charger 5.7L RWD	Dodge Charger 3.6L AWD	Pass
11 a.m.	Chevrolet Silverado Z71 4WD	Dodge Durango 3.6L AWD	Ford Mustang Mach-E AWD	Chevrolet Silverado Z7X 4WD
11:30 a.m.	Chevrolet Tahoe 5.3L RWD	Pass	Ford Police Interceptor Utility 3.3L AWD	Dodge Durango 5.7L AWD
12 p.m.	Ford F150 3.5L EcoBoost 4WD	Ford Police Interceptor Utility 3.3L Hybrid AWD	Pass	Chevrolet Tahoe 5.3L 4WD
12:30 p.m.	Lunch	Lunch	Lunch	Lunch
1 p.m.	Pass	Ford Utility 3.0L EcoBoost AWD	Dodge Charger 5.7L RWD	Dodge Charger 3.6L AWD
1:30 p.m.	Chevrolet Silverado Z7X 4WD	Chevrolet Silverado Z71 4WD	Dodge Durango 3.6L AWD	Ford Mustang Mach-E AWD
2 p.m.	Dodge Durango 5.7L AWD	Chevrolet Tahoe 5.3L RWD	Pass	Ford Police Interceptor Utility 3.3L AWD
2:30 p.m.	Chevrolet Tahoe 5.3L 4WD	Ford F150 3.5L EcoBoost 4WD	Ford Police Interceptor Utility 3.3L Hybrid AWD	Pass
3 p.m.	Dodge Charger 3.6L AWD	Pass	Ford Utility 3.0L EcoBoost AWD	Dodge Charger 5.7L RWD
3:30 p.m.	Ford Mustang Mach-E AWD	Chevrolet Silverado Z7X 4WD	Chevrolet Silverado Z71 4WD	Dodge Durango 3.6L AWD
4 p.m.	Ford Police Interceptor Utility 3.3L AWD	Dodge Durango 5.7L AWD	Chevrolet Tahoe 5.3L RWD	Pass
4:30 p.m.	Pass	Chevrolet Tahoe 5.3L 4WD	Ford F150 3.5L EcoBoost 4WD	Ford Police Interceptor Utility 3.3L Hybrid AWD
5 p.m.	Dodge Charger 5.7L RWD	Dodge Charger 3.6L AWD	Pass	Ford Utility 3.0L EcoBoost AWD

VEHICLE DYNAMICS TESTING- SEPTEMBER 19, 2022

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
Chevrolet Tahoe 5.3L RWD	MERCER	01:38.12	01:37.79	01:37.81	01:37.77	01:37.97	01:37.89
	DARLINGTON	01:37.69	01:37.64	01:37.61	01:37.60	01:37.41	01:37.59
	AGEMA	01:39.39	01:39.21	01:38.85	01:39.28	01:38.98	01:39.14
	LOONEY	01:38.82	01:38.73	01:38.28	01:38.65	01:38.45	01:38.59
OVERALL AVERAGE							01:38.30
Chevrolet Tahoe 5.3L 4WD	LOONEY	01:39.08	01:38.58	01:38.95	01:38.91	01:38.67	01:38.84
	MERCER	01:37.75	01:37.97	01:38.03	01:37.97	01:37.65	01:37.87
	DARLINGTON	01:38.05	01:38.14	01:37.74	01:37.66	01:37.81	01:37.88
	AGEMA	01:39.98	01:40.14	01:39.82	01:40.20	01:39.22	01:39.87
OVERALL AVERAGE							01:38.62
Chevrolet Silverado Z7X 4WD	LOONEY	01:42.09	01:41.67	01:41.81	01:41.98	01:41.34	01:41.78
	MERCER	01:40.63	01:40.58	01:40.47	01:40.52	01:40.75	01:40.59
	DARLINGTON	01:42.12	01:41.17	01:41.36	01:41.40	01:40.73	01:41.36
	AGEMA	01:41.46	01:41.11	01:41.37	01:41.47	01:41.42	01:41.37
OVERALL AVERAGE							01:41.27
Chevrolet Silverado Z71 4WD	MERCER	01:40.59	01:40.70	01:40.76	01:40.51	01:40.22	01:40.56
	DARLINGTON	01:40.58	01:39.80	01:40.33	01:39.90	01:40.10	01:40.14
	AGEMA	01:40.94	01:41.14	01:40.33	01:40.40	01:40.29	01:40.62
	LOONEY	01:40.97	01:40.72	01:40.94	01:40.65	01:40.74	01:40.80
OVERALL AVERAGE							01:40.53
Dodge Charger 5.7L RWD	AGEMA	01:36.83	01:36.29	01:36.39	01:36.81	01:36.09	01:36.48
	LOONEY	01:37.04	01:36.69	01:36.98	01:36.31	01:36.46	01:36.70
	MERCER	01:35.54	01:36.10	01:35.65	01:35.42	01:36.05	01:35.75
	DARLINGTON	01:36.44	01:36.33	01:36.38	01:36.55	01:36.27	01:36.39
OVERALL AVERAGE							01:36.33
Dodge Charger 3.6L AWD	LOONEY	01:38.69	01:38.43	01:37.98	01:38.36	01:38.59	01:38.41
	MERCER	01:37.39	01:37.36	01:37.70	01:37.85	01:37.45	01:37.55
	DARLINGTON	01:37.24	01:37.46	01:36.96	01:37.45	01:37.35	01:37.29
	AGEMA	01:38.11	01:38.10	01:37.81	01:37.87	01:37.87	01:37.95
OVERALL AVERAGE							01:37.80

VEHICLE DYNAMICS TESTING- SEPTEMBER 19, 2022

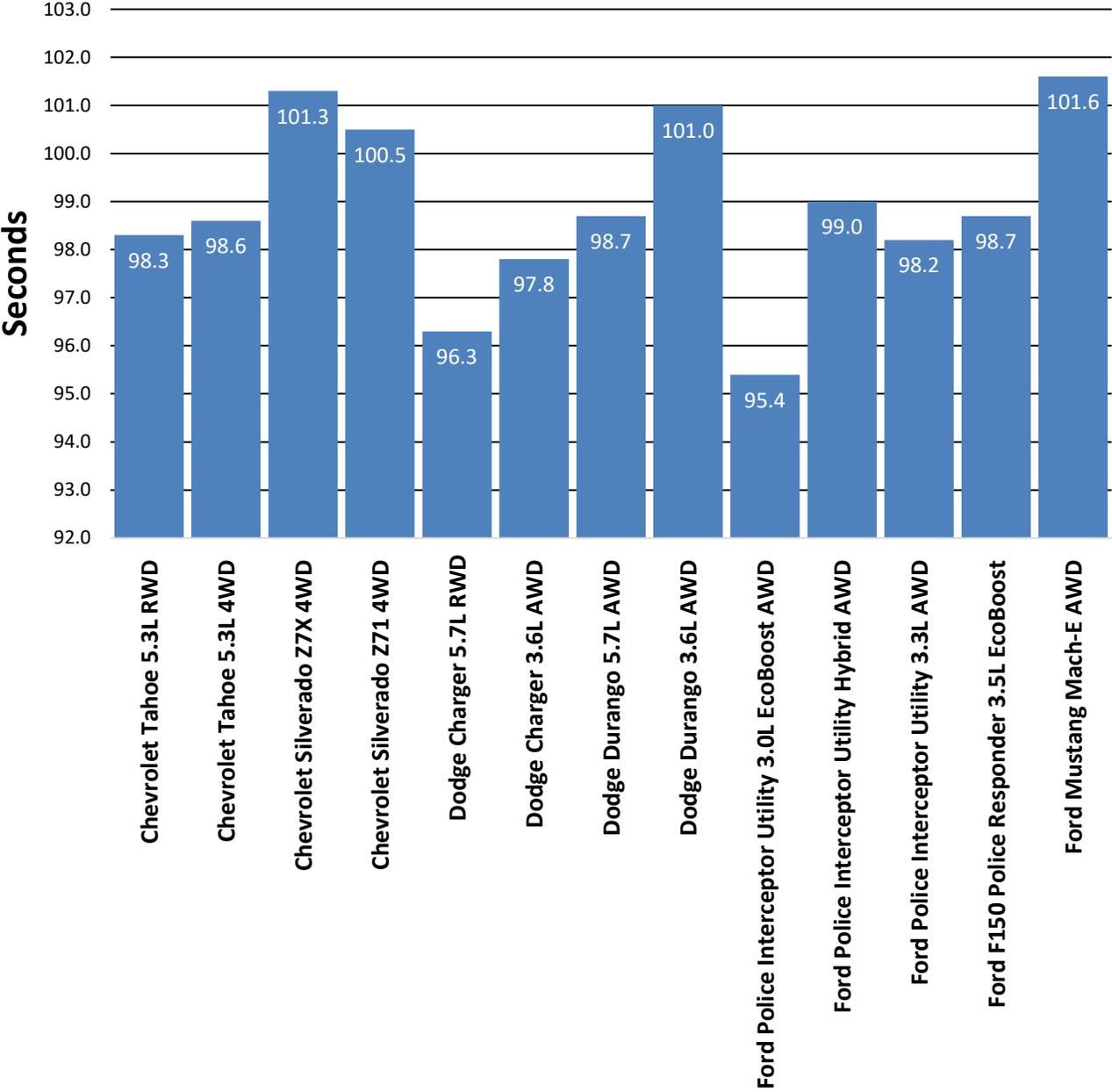
Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
Dodge Durango 5.7L AWD	LOONEY	01:39.32	01:38.94	01:39.16	01:38.94	01:38.83	01:39.04
	MERCER	01:38.43	01:38.54	01:38.46	01:38.32	01:38.43	01:38.44
	DARLINGTON	01:38.50	01:38.29	01:38.47	01:38.42	01:38.64	01:38.46
	AGEMA	01:38.74	01:38.84	01:38.74	01:38.59	01:38.94	01:38.77
OVERALL AVERAGE							01:38.68
Dodge Durango 3.6L AWD	DARLINGTON	01:41.07	01:40.95	01:40.85	01:40.67	01:40.33	01:40.77
	AGEMA	01:40.57	01:40.47	01:40.90	01:40.57	01:40.73	01:40.65
	LOONEY	01:42.07	01:41.83	01:42.04	01:41.53	01:42.14	01:41.92
	MERCER	01:40.79	01:40.67	01:40.78	01:40.83	01:40.82	01:40.78
OVERALL AVERAGE							01:41.03
Ford Police Interceptor Utility 3.0L EcoBoost AWD	DARLINGTON	01:35.59	01:35.13	01:35.13	01:35.22	01:35.61	01:35.34
	AGEMA	01:35.20	01:35.58	01:35.18	01:35.30	01:35.51	01:35.36
	LOONEY	01:36.20	01:36.30	01:35.86	01:35.96	01:35.98	01:36.06
	MERCER	01:34.92	01:35.16	01:34.86	01:34.70	01:35.07	01:34.94
OVERALL AVERAGE							01:35.42
Ford Police Interceptor Utility Hybrid AWD	DARLINGTON	01:38.41	01:38.07	01:38.75	01:38.35	01:38.80	01:38.47
	AGEMA	01:39.42	01:39.31	01:39.52	01:39.45	01:38.96	01:39.33
	LOONEY	01:39.47	01:39.65	01:39.67	01:39.51	01:39.00	01:39.46
	MERCER	01:38.09	01:39.13	01:38.73	01:38.98	01:38.51	01:38.69
OVERALL AVERAGE							01:38.99
Ford Police Interceptor Utility 3.3L AWD	AGEMA	01:38.24	01:38.43	01:38.70	01:38.77	01:38.25	01:38.48
	LOONEY	01:38.57	01:39.04	01:38.98	01:38.82	01:39.02	01:38.89
	MERCER	01:37.53	01:37.22	01:37.96	01:37.97	01:37.44	01:37.63
	DARLINGTON	01:37.76	01:37.62	01:37.90	01:37.84	01:37.92	01:37.81
OVERALL AVERAGE							01:38.20
Ford F-150 Police Responder 3.5L EcoBoost 4WD	MERCER	01:39.84	01:39.61	01:39.49	01:39.46	01:38.71	01:39.42
	DARLINGTON	01:37.99	01:37.52	01:37.27	01:37.79	01:37.87	01:37.69
	AGEMA	01:38.68	01:37.98	01:38.70	01:38.59	01:38.67	01:38.52
	LOONEY	01:39.07	01:38.58	01:39.08	01:39.16	01:38.93	01:38.96
OVERALL AVERAGE							01:38.65

VEHICLE DYNAMICS TESTING- SEPTEMBER 19, 2022

Vehicle	Driver	Time of Run	Begin Battery State of Charge	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	End Battery State of Charge	Average
Ford Mustang Mach-E AWD	AGEMA	9:37 a.m.	100%	01:41.05	01:42.03	01:41.69	01:41.61	01:41.97	69%	01:41.67
	LOONEY	11:05 a.m.	80%	01:41.85	01:42.29	01:42.40	01:42.71	01:43.49	49%	01:42.55
	MERCER	1:18 p.m.	79%	01:38.22	01:41.11	01:41.43	01:42.12	01:42.07	51%	01:40.99
	DARLINGTON	2:44 p.m.	86%	01:40.48	01:41.07	01:41.50	01:41.68	01:41.78	55%	01:41.30
OVERALL AVERAGE										01:41.63

The MSP Precision Driving Unit and vehicle manufacturers have been in discussions regarding the testing of Battery Electric Vehicles for the past three years. All three manufacturers agreed that a charge time of approximately 40 minutes between runs would showcase the vehicle's capabilities in a best-case scenario. The above chart shows the beginning battery state of charge, the fastest five lap times out of the eight timed laps, and the battery ending state of charge. A 47 Kw charger was used to refresh the vehicle's state of charge between runs.

2023 Model Year Vehicle Dynamics





ACCELERATION AND TOP SPEED TESTING

ACCELERATION TESTING OBJECTIVE:

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

ACCELERATION TESTING METHODOLOGY:

Using a Racelogic 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.

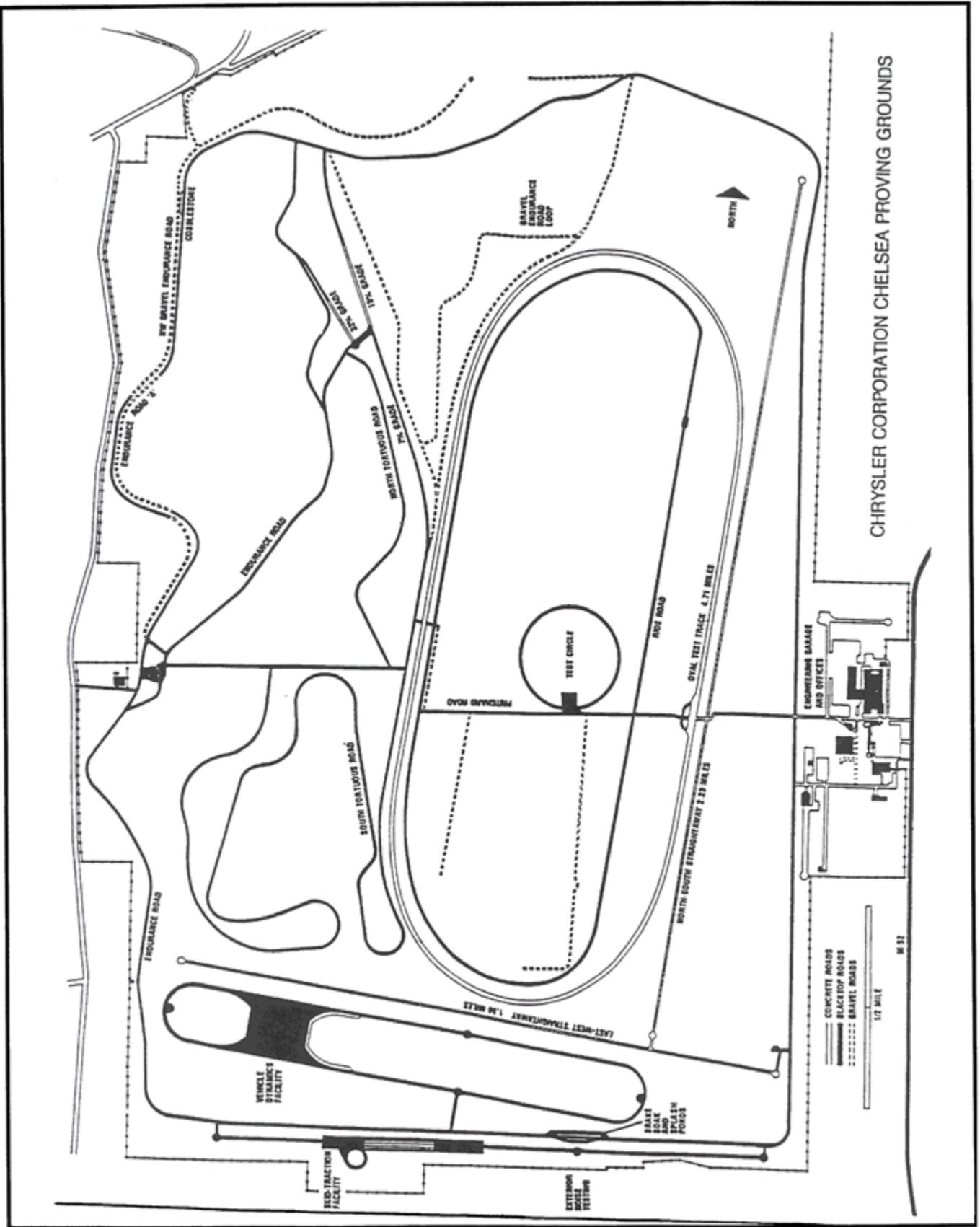
TOP SPEED TESTING OBJECTIVE:

To verify the electronically limited top speed reported by the manufacturer attainable by each test vehicle within 14 miles from a standing start.

TOP SPEED TESTING METHODOLOGY:

Following the fourth acceleration run, each test vehicle continues to accelerate until it reaches the manufacturer electronically limited top speed. The distance to reach the electronically limited top speed must be reached within 14 miles.





CHRYSLER CORPORATION CHELSEA PROVING GROUNDS

Chevrolet Tahoe 5.3L RWD

BEGINNING TIME: 9:19 a.m.
WIND VELOCITY: 3.5 mph

TEMPERATURE: 64.2° F
WIND DIRECTION: 103°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	7.72	7.20	7.17	7.42	7.38
0-80	12.41	11.68	11.70	11.88	11.92
0-100	19.41	18.31	18.61	18.46	18.70

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

TOP SPEED ATTAINED: 130 mph

DISTANCE TO REACH TOP SPEED: 1.96 miles **TIME TO REACH TOP SPEED:** 66.22 seconds

Chevrolet Tahoe 5.3L 4WD

BEGINNING TIME: 10:30 a.m.
WIND VELOCITY: 2.2 mph

TEMPERATURE: 68.4° F
WIND DIRECTION: 174°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	8.19	7.71	8.20	8.01	8.03
0-80	13.27	12.54	13.10	12.83	12.94
0-100	20.96	19.69	20.62	19.99	20.32

DISTANCE TO REACH 100 MPH: 0.36 mile **DISTANCE TO REACH 120 MPH:** 0.80 mile

TOP SPEED ATTAINED: 124 mph

DISTANCE TO REACH TOP SPEED: 0.91 mile **TIME TO REACH TOP SPEED:** 37.54 seconds

Chevrolet Silverado Z7X 4WD

BEGINNING TIME: 11:33 a.m.
WIND VELOCITY: 2.5 mph

TEMPERATURE: 71.9° F
WIND DIRECTION: 208°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	7.87	7.19	7.24	7.41	7.43
0-80	12.67	11.60	11.77	11.74	11.95
0-100	19.99	18.22	18.94	18.31	18.87

DISTANCE TO REACH 100 MPH: 0.33 mile

DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 112 mph

DISTANCE TO REACH TOP SPEED: 0.50 mile

TIME TO REACH TOP SPEED: 24.38 seconds

Chevrolet Silverado Z71 4WD

BEGINNING TIME: 12:59 p.m.
WIND VELOCITY: 4.2 mph

TEMPERATURE: 78.7° F
WIND DIRECTION: 183°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	7.78	7.51	7.64	7.43	7.59
0-80	12.45	11.89	12.09	11.73	12.04
0-100	19.55	18.24	18.95	18.05	18.70

DISTANCE TO REACH 100 MPH: 0.33 mile

DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 112 mph

DISTANCE TO REACH TOP SPEED: 0.48 mile

TIME TO REACH TOP SPEED: 23.80 seconds

Dodge Charger 5.7L RWD

BEGINNING TIME: 9:35 a.m.
WIND VELOCITY: 2.4 mph

TEMPERATURE: 64.2° F
WIND DIRECTION: 104°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	6.11	5.98	6.02	5.91	6.01
0-80	9.67	9.38	9.36	9.31	9.43
0-100	14.46	14.02	14.05	13.86	14.10

DISTANCE TO REACH 100 MPH: 0.24 mile **DISTANCE TO REACH 120 MPH:** 0.45 mile

TOP SPEED ATTAINED: 140 mph

DISTANCE TO REACH TOP SPEED: 0.95 mile **TIME TO REACH TOP SPEED:** 34.38 seconds

Dodge Charger 3.6L AWD

BEGINNING TIME: 10:50 a.m.
WIND VELOCITY: 2.9 mph

TEMPERATURE: 71.4° F
WIND DIRECTION: 229°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	7.56	7.44	7.56	7.72	7.57
0-80	12.17	11.92	12.26	12.42	12.19
0-100	19.11	18.55	19.27	19.32	19.06

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

TOP SPEED ATTAINED: 140 mph

DISTANCE TO REACH TOP SPEED: 5.33 miles **TIME TO REACH TOP SPEED:** 154.20 seconds

Dodge Durango 5.7L AWD

BEGINNING TIME: 12:26 p.m.

TEMPERATURE: 76.4° F

WIND VELOCITY: 3.7 mph

WIND DIRECTION: 221°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	7.61	7.23	7.16	7.06	7.27
0-80	12.57	11.93	11.97	11.85	12.08
0-100	20.12	18.90	19.07	18.94	19.26

DISTANCE TO REACH 100 MPH: 0.35 mile

DISTANCE TO REACH 120 MPH: 0.72 mile

TOP SPEED ATTAINED: 130 mph

DISTANCE TO REACH TOP SPEED: 1.21 miles

TIME TO REACH TOP SPEED: 45.07 seconds

Dodge Durango 3.6L AWD

BEGINNING TIME: 1:15 p.m.

TEMPERATURE: 79.1° F

WIND VELOCITY: 3.7 mph

WIND DIRECTION: 173°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	8.89	8.40	8.63	8.68	8.65
0-80	14.94	14.22	14.70	14.82	14.67
0-100	24.90	23.08	24.58	23.89	24.11

DISTANCE TO REACH 100 MPH: 0.44 mile

DISTANCE TO REACH 120 MPH: 1.15 miles

TOP SPEED ATTAINED: 128 mph

DISTANCE TO REACH TOP SPEED: 5.33 miles

TIME TO REACH TOP SPEED: 168.80 seconds

Ford Police Interceptor Utility 3.0L EcoBoost AWD

BEGINNING TIME: 11:11 a.m.

TEMPERATURE: 71.9° F

WIND VELOCITY: 2.5 mph

WIND DIRECTION: 208°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	5.62	5.67	5.69	5.75	5.68
0-80	9.21	9.33	9.79	9.61	9.49
0-100	14.35	14.43	15.14	15.04	14.74

DISTANCE TO REACH 100 MPH: 0.26 mile

DISTANCE TO REACH 120 MPH: 0.48 mile

TOP SPEED ATTAINED: 148 mph

DISTANCE TO REACH TOP SPEED: 1.27 miles

TIME TO REACH TOP SPEED: 42.70 seconds

Ford Police Interceptor Utility 3.3L Hybrid AWD

BEGINNING TIME: 12:41 p.m.

TEMPERATURE: 77.6° F

WIND VELOCITY: 7.2 mph

WIND DIRECTION: 246°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	7.27	7.24	7.28	7.31	7.28
0-80	11.78	11.49	11.63	11.57	11.62
0-100	18.25	16.81	17.97	17.63	17.67

DISTANCE TO REACH 100 MPH: 0.31 mile

DISTANCE TO REACH 120 MPH: 0.63 mile

TOP SPEED ATTAINED: 136 mph

DISTANCE TO REACH TOP SPEED: 1.09 miles

TIME TO REACH TOP SPEED: 40.85 seconds

Ford Police Interceptor Utility 3.3L AWD

BEGINNING TIME: 1:32 p.m.
WIND VELOCITY: 2.9 mph

TEMPERATURE: 79.2° F
WIND DIRECTION: 164°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	8.03	7.84	7.82	8.10	7.95
0-80	12.94	12.42	12.55	12.68	12.65
0-100	20.51	19.09	19.64	19.68	19.73

DISTANCE TO REACH 100 MPH: 0.35 mile **DISTANCE TO REACH 120 MPH:** 0.74 mile

TOP SPEED ATTAINED: 136 mph

DISTANCE TO REACH TOP SPEED: 2.63 miles **TIME TO REACH TOP SPEED:** 84.15 seconds

Ford F150 Police Responder 3.5L EcoBoost 4WD

BEGINNING TIME: 9:52 a.m.
WIND VELOCITY: 2.2 mph

TEMPERATURE: 66.3° F
WIND DIRECTION: 86°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	5.69	5.76	5.69	5.74	5.72
0-80	9.13	9.09	9.13	9.13	9.12
0-100	14.32	13.94	14.33	14.04	14.16

DISTANCE TO REACH 100 MPH: 0.25 mile **DISTANCE TO REACH 120 MPH:** 0.53 mile

TOP SPEED ATTAINED: 120 mph

DISTANCE TO REACH TOP SPEED: 0.50 mile **TIME TO REACH TOP SPEED:** 22.37 seconds

Ford Mustang Mach-E AWD

BEGINNING TIME: 9:02 a.m.

TEMPERATURE: 61.9° F

WIND VELOCITY: 3.8 mph

WIND DIRECTION: 67°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	3.93	3.89	3.92	3.96	3.93
0-80	6.37	6.33	6.39	6.40	6.37
0-100	11.80	12.25	12.52	12.33	12.23

DISTANCE TO REACH 100 MPH: 0.23 mile

DISTANCE TO REACH 120 MPH: 0.93 mile

TOP SPEED ATTAINED: 122 mph

DISTANCE TO REACH TOP SPEED: 3.29 miles

TIME TO REACH TOP SPEED: 104.35 seconds

SUMMARY OF ACCELERATION AND TOP SPEED

	Chevrolet Tahoe 5.3L RWD	Chevrolet Tahoe 5.3L 4WD	Chevrolet Silverado Z7X 4WD	Chevrolet Silverado Z71 4WD
ACCELERATION (seconds)				
0-20 mph	1.84	2.01	1.81	2.00
0-30 mph	2.84	3.09	2.83	3.02
0-40 mph	4.18	4.57	4.18	4.38
0-50 mph	5.63	6.13	5.64	5.82
0-60 mph	7.38	8.03	7.43	7.59
0-70 mph	9.40	10.22	9.48	9.62
0-80 mph	11.92	12.94	11.95	12.04
0-90 mph	14.96	16.18	14.92	14.93
0-100 mph	18.70	20.32	18.87	18.70
TOP SPEED (mph)	130	124	112	112
DISTANCE TO REACH (miles)				
100 mph	0.33	0.36	0.33	0.33
120 mph	0.73	0.80	N/A	N/A
Top Speed	1.96	0.91	0.50	0.48

SUMMARY OF ACCELERATION AND TOP SPEED				
	Dodge Charger 5.7L RWD	Dodge Charger 3.6L AWD	Dodge Durango 5.7L AWD	Dodge Durango 3.6L AWD
ACCELERATION (seconds)				
0-20 mph	1.69	1.78	1.77	1.95
0-30 mph	2.47	2.89	2.72	3.08
0-40 mph	3.43	4.13	3.94	4.56
0-50 mph	4.50	5.65	5.38	6.27
0-60 mph	6.01	7.57	7.27	8.65
0-70 mph	7.64	9.83	9.37	11.30
0-80 mph	9.43	12.19	12.08	14.67
0-90 mph	11.70	15.53	15.10	18.90
0-100 mph	14.10	19.06	19.26	24.11
TOP SPEED (mph)	140	140	130	128
DISTANCE TO REACH (miles)				
100 mph	0.24	0.34	0.35	0.44
120 mph	0.45	0.74	0.72	1.15
Top Speed	0.95	5.33	1.21	5.33



SUMMARY OF ACCELERATION AND TOP SPEED

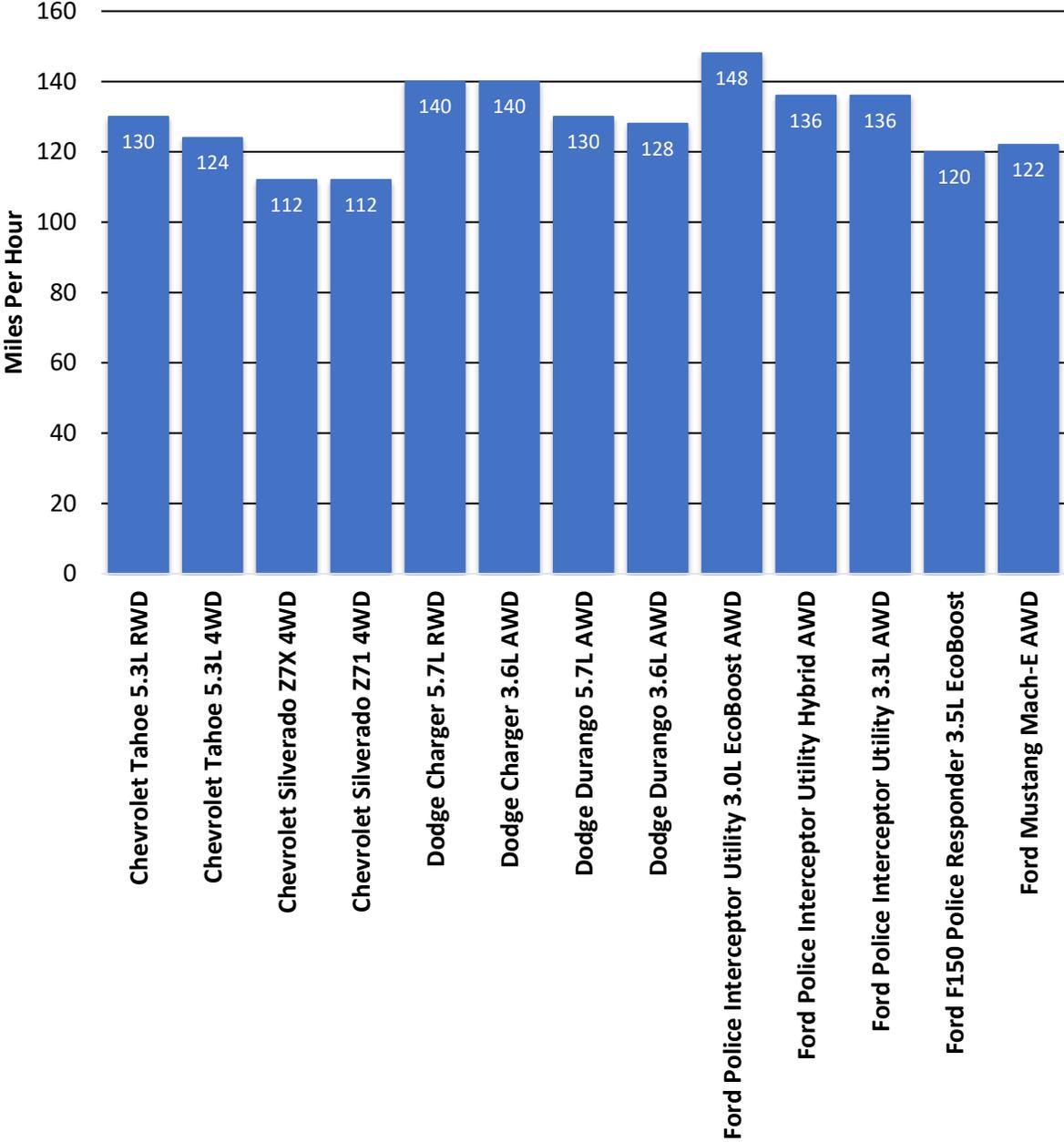
	Ford PI Utility 3.0L EcoBoost AWD	Ford PI Utility Hybrid AWD	Ford PI Utility 3.3L AWD
ACCELERATION (seconds)			
0-20 mph	1.46	1.68	2.08
0-30 mph	2.22	2.83	3.21
0-40 mph	3.21	4.14	4.57
0-50 mph	4.33	5.61	6.16
0-60 mph	5.68	7.28	7.95
0-70 mph	7.23	9.27	10.08
0-80 mph	9.49	11.62	12.65
0-90 mph	11.90	14.40	15.77
0-100 mph	14.74	17.67	19.73
TOP SPEED (mph)	148	136	136
DISTANCE TO REACH (miles)			
100 mph	0.26	0.31	0.35
120 mph	0.48	0.63	0.74
Top Speed	1.27	1.09	2.63

SUMMARY OF ACCELERATION AND TOP SPEED

	Ford F150 Police Responder 3.5L EcoBoost	Ford Mustang Mach-E AWD
ACCELERATION (seconds)		
0-20 mph	1.54	1.16
0-30 mph	2.25	1.75
0-40 mph	3.27	2.34
0-50 mph	4.31	3.05
0-60 mph	5.72	3.93
0-70 mph	7.19	4.98
0-80 mph	9.12	6.37
0-90 mph	11.22	8.66
0-100 mph	14.16	12.23
TOP SPEED (mph)	120	122
DISTANCE TO REACH (miles)		
100 mph	0.25	0.23
120 mph	0.53	0.93
Top Speed	0.5	3.29

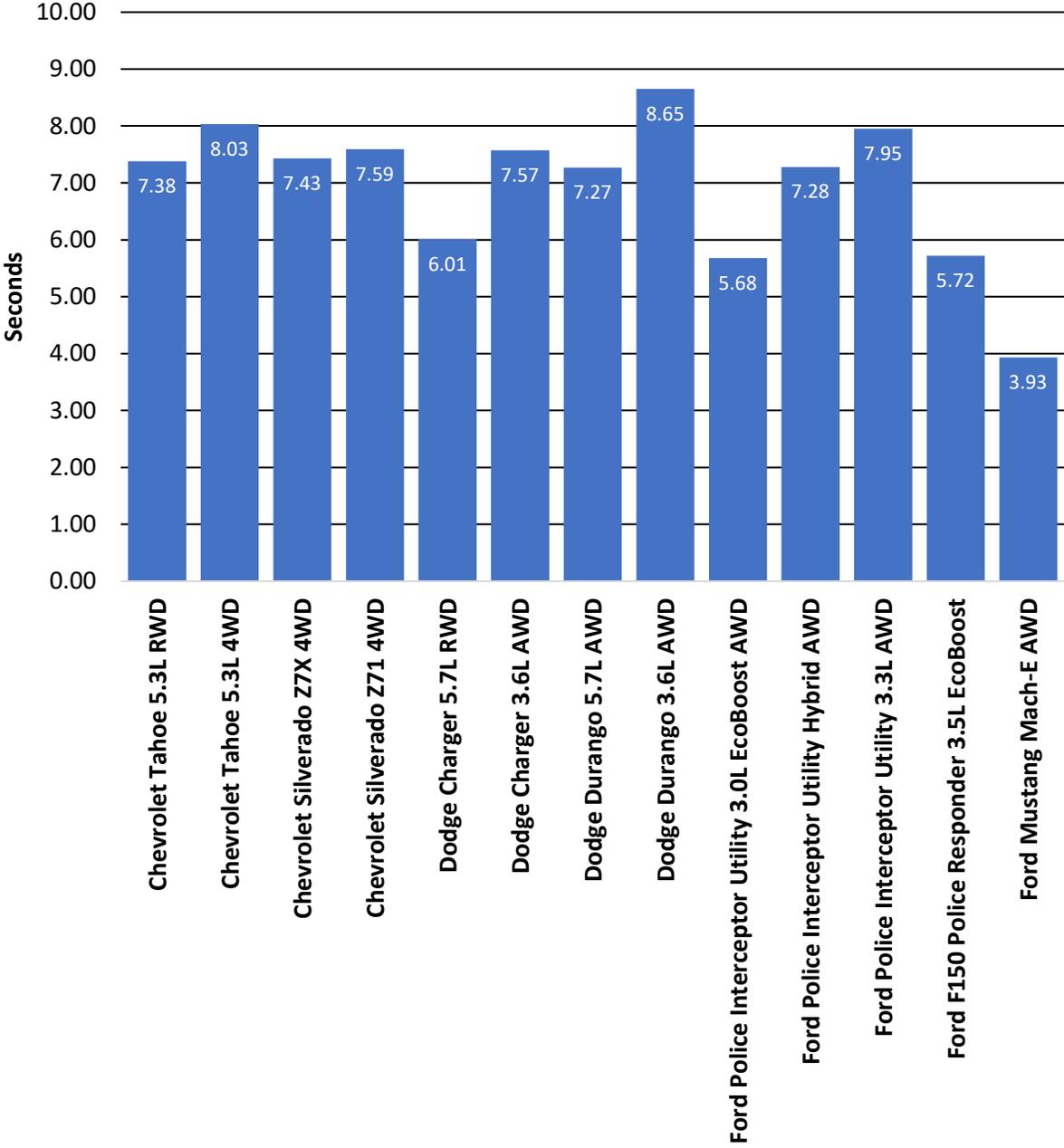


2023 Model Year Top Speed Comparison Top Speed Attained



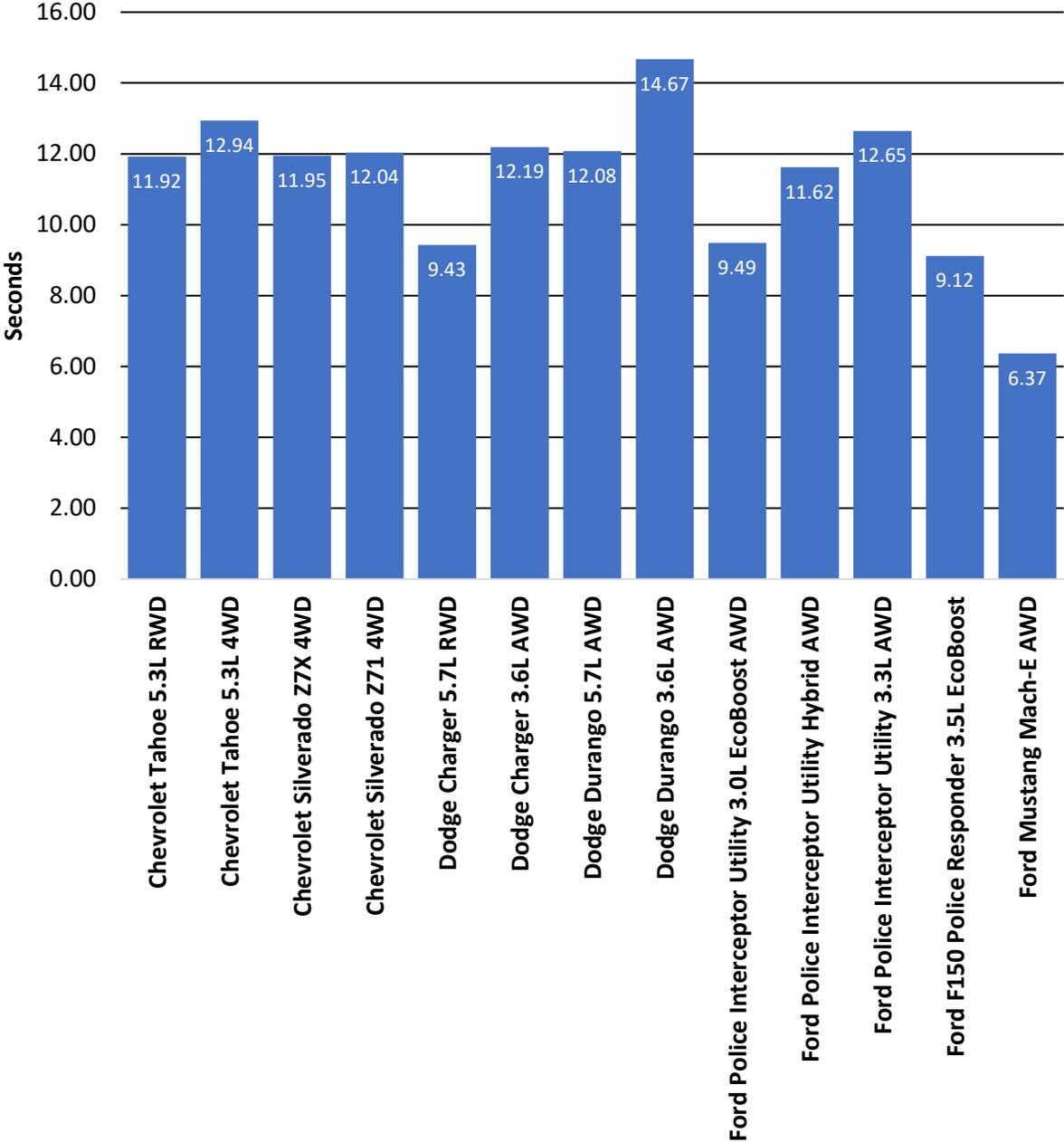
2023 Model Year Acceleration Comparison

Acceleration Times 0-60 mph



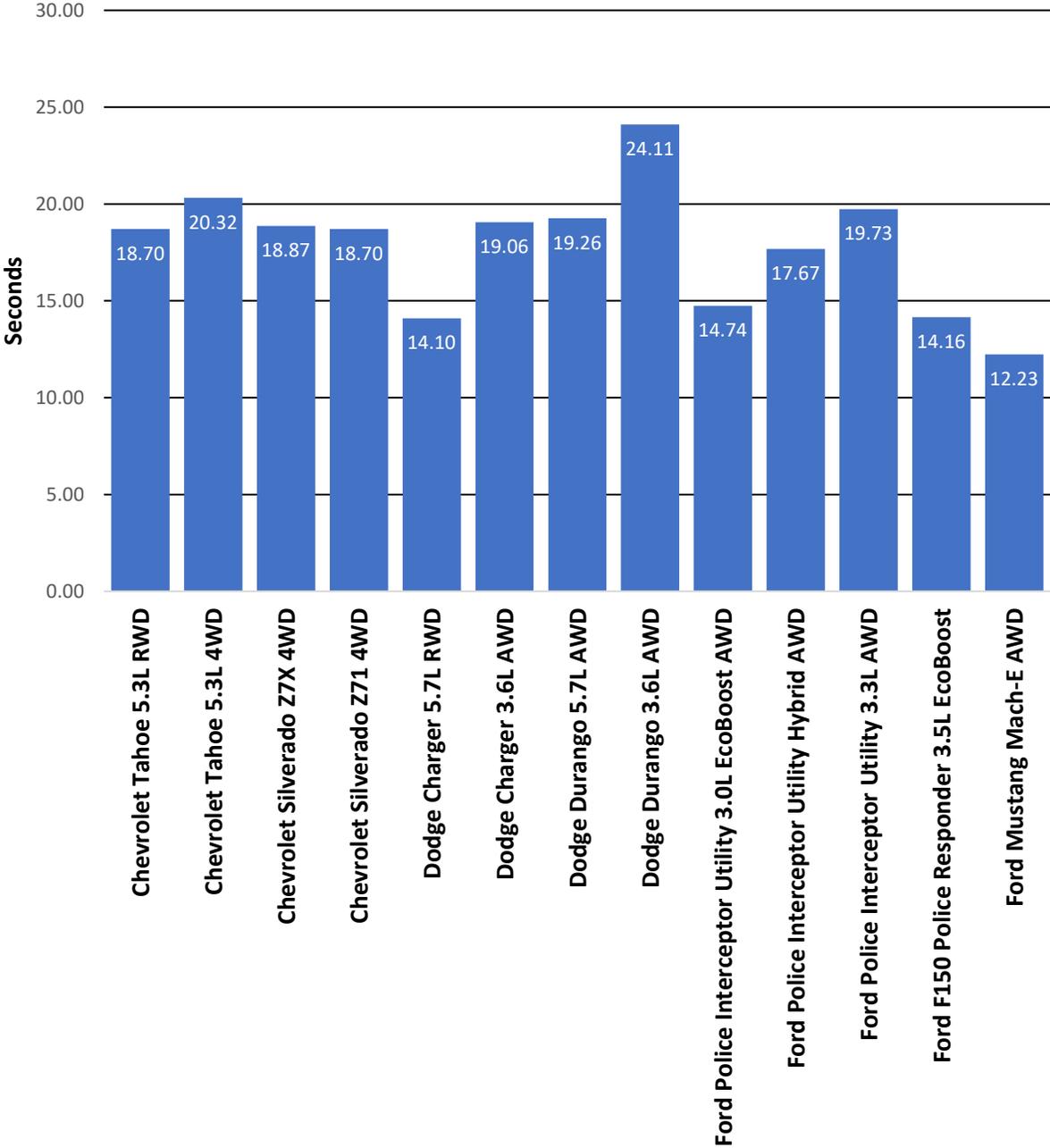
2023 Model Year Acceleration Comparison

Acceleration Times 0-80 mph



2023 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 Anti-lock brake stops. Each vehicle is scored on the average deceleration rate it achieves.

BRAKE TESTING METHODOLOGY:

Each vehicle is driven to the north end of the straightaway on the east side of the oval. The vehicle then begins its sequence of stops heading in a southerly direction. The vehicle is stopped five times at pre-determined points on the roadway. The vehicle is then turned around and stops an additional five times again at pre-determined points on the roadway in a northerly direction. After the ten stops, the vehicle drives one lap around the oval at 45 mph. This is done to cool the brakes before the second sequence. After the cool down lap, the ten 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.

DECELARATION RATE FORMULA:

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

EXAMPLE:

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

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

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

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

EXAMPLE:

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

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

BRAKE TESTING

Chevrolet Tahoe 5.3L RWD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 9:43 a.m.

DATE: September 17, 2022
TEMPERATURE: 64.2° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.10	129.20	30.07
2	60.20	128.90	30.24
3	60.30	131.40	29.76
4	60.00	128.00	30.25
5	60.30	129.80	30.13
6	59.90	131.10	29.44
7	61.60	136.20	29.97
8	60.60	132.00	29.92
9	60.10	130.40	29.79
10	60.00	132.20	29.29
AVERAGE DECELERATION RATE:			29.89 ft/s ²

(One cool down lap at 45 mph)

Phase II

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.20	131.00	29.76
2	60.30	128.50	30.44
3	60.50	128.60	30.61
4	60.30	129.80	30.13
5	60.10	126.10	30.81
6	60.00	125.70	30.80
7	59.70	122.70	31.24
8	60.00	124.80	31.03
9	59.80	124.80	30.82
10	59.90	121.20	31.84
AVERAGE DECELERATION RATE:			30.75 ft/s ²

Phase III

OVERALL AVERAGE DECELERATION RATE:	30.32 ft/s ²
PROJECTED STOPPING DISTANCE FROM 60 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 (ABS)

BRAKE TESTING

Chevrolet Tahoe 5.3L 4WD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 11:07 a.m.

DATE: September 17, 2022
TEMPERATURE: 71.4° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.10	129.60	29.98
2	60.10	128.60	30.21
3	60.00	130.80	29.60
4	60.00	133.20	29.07
5	60.40	132.30	29.66
6	60.20	134.30	29.02
7	60.10	132.90	29.23
8	60.00	137.20	28.22
9	59.90	131.30	29.39
10	60.50	131.70	29.89
AVERAGE DECELERATION RATE:			29.43 ft/s²

(One cool down lap at 45 mph)

Phase II

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.20	133.70	29.16
2	59.80	127.50	30.17
3	60.20	132.90	29.33
4	60.20	128.70	30.29
5	60.10	129.60	29.98
6	60.20	127.80	30.50
7	60.10	127.00	30.59
8	59.30	123.80	30.55
9	60.40	128.90	30.44
10	60.10	130.20	29.84
AVERAGE DECELERATION RATE:			30.08 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	29.76 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 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 (ABS)

BRAKE TESTING

Chevrolet Silverado Z7X 4WD

TEST LOCATION: Chelsea Proving Grounds
 BEGINNING TIME: 12:08 p.m.

DATE: September 17, 2022
 TEMPERATURE: 74.9° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.00	143.00	27.08
2	60.30	140.10	27.92
3	60.30	143.60	27.24
4	60.30	144.00	27.16
5	60.30	143.20	27.31
6	59.30	143.40	26.38
7	60.80	146.90	27.07
8	60.20	142.50	27.35
9	60.20	142.00	27.45
10	60.00	140.60	27.54
AVERAGE DECELERATION RATE:			27.25 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/s ²)
1	59.90	144.90	26.63
2	60.40	137.20	28.60
3	60.00	141.90	27.29
4	60.30	139.40	28.06
5	60.10	139.20	27.91
6	60.20	137.20	28.41
7	60.20	136.50	28.56
8	60.10	137.30	28.30
9	59.90	137.00	28.17
10	60.10	138.20	28.11
AVERAGE DECELERATION RATE:			28.00 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	27.63 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 mph:	140.2 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 (ABS)

BRAKE TESTING

Chevrolet Silverado Z71 4WD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 1:27 p.m.

DATE: September 17, 2022
TEMPERATURE: 79.1° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.00	141.50	27.37
2	60.60	143.20	27.58
3	60.00	141.60	27.35
4	60.00	139.50	27.76
5	60.10	140.70	27.61
6	60.40	143.60	27.33
7	60.30	146.90	26.62
8	60.20	142.50	27.35
9	60.10	146.10	26.59
10	60.30	145.40	26.90
AVERAGE DECELERATION RATE:			27.25 ft/s ²

(One cool down lap at 45 mph)

Phase II

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.10	141.40	27.48
2	60.30	141.10	27.72
3	60.20	140.90	27.67
4	60.20	142.60	27.34
5	60.20	139.40	27.96
6	60.00	138.60	27.94
7	60.20	137.00	28.45
8	60.10	137.50	28.26
9	59.70	135.20	28.35
10	59.90	138.10	27.95
AVERAGE DECELERATION RATE:			27.91 ft/s ²

Phase III

OVERALL AVERAGE DECELERATION RATE:	27.58 ft/s ²
PROJECTED STOPPING DISTANCE FROM 60 mph:	140.4 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 (ABS)

BRAKE TESTING

Dodge Charger 5.7L RWD

TEST LOCATION: Chelsea Proving Grounds
 BEGINNING TIME: 10:11 a.m.

DATE: September 17, 2022
 TEMPERATURE: 68.4° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.30	133.7	29.25
2	59.80	127.1	30.26
3	59.80	128.5	29.93
4	60.00	128.1	30.23
5	59.80	128.2	30.00
6	60.10	131.8	29.48
7	60.10	129.3	30.05
8	60.10	130.9	29.68
9	60.20	131.2	29.71
10	60.40	132.9	29.53
AVERAGE DECELERATION RATE:			29.81 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/s ²)
1	60.30	131.20	29.81
2	60.30	132.30	29.56
3	60.20	130.20	29.94
4	60.10	130.60	29.75
5	60.10	131.40	29.57
6	60.10	129.20	30.07
7	60.30	129.60	30.18
8	59.80	128.10	30.03
9	60.30	129.70	30.15
10	60.00	127.90	30.28
AVERAGE DECELERATION RATE:			29.97 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	29.89 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 mph:	129.6 feet

Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

*All vehicles tested are equipped with Anti-lock brakes (ABS)

BRAKE TESTING

Dodge Charger 3.6L AWD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 11:25 a.m.

DATE: September 17, 2022
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/s ²)
1	60.30	134.10	29.16
2	60.00	131.50	29.45
3	60.30	131.20	29.81
4	60.30	129.70	30.15
5	60.60	128.70	30.69
6	60.40	131.40	29.86
7	60.90	130.20	30.64
8	60.20	130.30	29.92
9	60.50	131.50	29.94
10	58.30	127.10	28.76
AVERAGE DECELERATION RATE:			29.84 ft/s ²

(One cool down lap at 45 mph)

Phase II

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.40	130.90	29.98
2	60.20	132.00	29.53
3	60.50	130.40	30.19
4	60.20	129.20	30.17
5	60.20	130.90	29.78
6	60.20	134.60	28.96
7	60.20	130.20	29.94
8	60.20	130.10	29.96
9	60.10	130.20	29.84
10	60.30	128.90	30.34
AVERAGE DECELERATION RATE:			29.87 ft/s ²

Phase III

OVERALL AVERAGE DECELERATION RATE:	29.85 ft/s ²
PROJECTED STOPPING DISTANCE FROM 60 mph:	129.7 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 (ABS)

BRAKE TESTING

Dodge Durango 5.7L AWD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 12:48 p.m.

DATE: September 17, 2022
TEMPERATURE: 77.6° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	59.80	139.60	27.55
2	59.40	132.10	28.73
3	59.70	138.20	27.74
4	59.50	134.50	28.31
5	61.10	139.90	28.70
6	59.60	134.10	28.49
7	59.30	145.70	25.96
8	59.80	136.80	28.12
9	60.00	136.90	28.28
10	60.10	140.40	27.67
AVERAGE DECELERATION RATE:			27.96 ft/s²

(One cool down lap at 45 mph)

Phase II

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.40	139.40	28.15
2	60.30	138.80	28.18
3	60.10	137.20	28.32
4	60.10	137.10	28.34
5	60.00	139.20	27.82
6	60.20	136.70	28.52
7	59.90	137.20	28.13
8	59.70	133.50	28.72
9	60.00	137.20	28.22
10	59.90	135.70	28.44
AVERAGE DECELERATION RATE:			28.28 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	28.12 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 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 (ABS)

BRAKE TESTING

Ford Police Interceptor Utility 3.0L EcoBoost AWD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 1:49 p.m.

DATE: September 17, 2022
TEMPERATURE: 78.7° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.00	139.60	27.74
2	59.80	134.70	28.56
3	59.90	135.00	28.59
4	59.70	132.00	29.04
5	59.40	130.30	29.13
6	60.40	139.90	28.05
7	60.40	135.30	29.00
8	60.10	134.90	28.80
9	59.40	132.50	28.64
10	60.10	136.20	28.52
AVERAGE DECELERATION RATE:			28.61 ft/s ²

(One cool down lap at 45 mph)

Phase II

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.20	135.90	28.68
2	59.70	134.40	28.52
3	60.20	135.50	28.77
4	60.00	135.30	28.62
5	59.90	135.10	28.57
6	59.90	137.10	28.15
7	59.90	135.20	28.54
8	60.10	135.10	28.76
9	59.90	133.40	28.93
10	60.20	135.70	28.73
AVERAGE DECELERATION RATE:			28.63 ft/s ²

Phase III

OVERALL AVERAGE DECELERATION RATE:	28.62 ft/s ²
PROJECTED STOPPING DISTANCE FROM 60 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 (ABS)

BRAKE TESTING

Ford Police Interceptor Utility 3.0L EcoBoost AWD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 11:46 a.m.

DATE: September 17, 2022
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/s ²)
1	60.20	136.00	28.66
2	60.30	130.70	29.92
3	60.50	131.00	30.05
4	59.70	128.10	29.93
5	60.40	133.10	29.48
6	60.20	132.60	29.40
7	60.40	131.30	29.89
8	60.40	131.20	29.91
9	60.30	134.20	29.14
10	60.30	135.20	28.93
AVERAGE DECELERATION RATE:			29.53 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/s ²)
1	60.50	134.20	29.34
2	60.10	134.20	28.95
3	60.30	133.00	29.41
4	60.50	134.20	29.34
5	60.40	137.10	28.62
6	60.10	134.30	28.93
7	59.50	127.20	29.94
8	60.20	132.10	29.51
9	60.40	131.40	29.86
10	60.30	132.40	29.54
AVERAGE DECELERATION RATE:			29.34 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	29.44 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 mph:	131.5 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 (ABS)

BRAKE TESTING

Ford Police Interceptor Utility Hybrid AWD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 1:09 p.m.

DATE: September 17, 2022
TEMPERATURE: 78.7° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.20	135.90	28.68
2	60.30	134.40	29.10
3	60.20	131.60	29.62
4	60.20	131.40	29.67
5	60.30	134.90	28.99
6	61.10	137.10	29.29
7	60.10	135.10	28.76
8	60.50	135.00	29.16
9	60.20	133.60	29.18
10	60.30	139.80	27.98
AVERAGE DECELERATION RATE:			29.04 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/s ²)
1	60.30	131.80	29.67
2	60.30	136.80	28.59
3	60.40	135.70	28.92
4	60.40	133.90	29.31
5	60.60	133.80	29.52
6	60.20	134.20	29.05
7	60.60	135.30	29.19
8	60.00	130.50	29.67
9	59.80	127.70	30.12
10	61.30	133.70	30.23
AVERAGE DECELERATION RATE:			29.43 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	29.23 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 mph:	132.5 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 (ABS)

BRAKE TESTING

Ford Police Interceptor Utility 3.3L AWD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 2:23 p.m.

DATE: September 17, 2022
TEMPERATURE: 80° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.20	132.00	29.53
2	60.20	129.70	30.05
3	60.10	131.00	29.66
4	60.50	135.70	29.01
5	60.30	131.50	29.74
6	60.20	133.70	29.16
7	60.40	137.60	28.52
8	60.00	130.70	29.63
9	60.30	133.00	29.41
10	60.70	135.90	29.16
AVERAGE DECELERATION RATE:			29.39 ft/s ²

(One cool down lap at 45 mph)

Phase II

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.30	129.30	30.25
2	59.20	134.00	28.13
3	60.40	132.40	29.64
4	60.30	135.90	28.78
5	60.50	136.70	28.80
6	60.40	133.20	29.46
7	59.80	131.40	29.27
8	60.20	131.60	29.62
9	60.00	129.10	29.99
10	60.10	128.50	30.23
AVERAGE DECELERATION RATE:			29.42 ft/s ²

Phase III

OVERALL AVERAGE DECELERATION RATE:	29.40 ft/s ²
PROJECTED STOPPING DISTANCE FROM 60 mph:	131.7 feet

Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

*All vehicles tested are equipped with Anti-lock brakes (ABS)

BRAKE TESTING

Ford F-150 Police Responder 3.5L EcoBoost

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 10:47 a.m.

DATE: September 17, 2022
TEMPERATURE: 71° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.10	165.10	23.53
2	59.90	158.10	24.41
3	60.10	157.60	24.65
4	60.20	161.90	24.08
5	60.20	161.20	24.18
6	60.10	157.60	24.65
7	60.10	158.00	24.59
8	60.10	165.00	23.55
9	60.30	171.20	22.84
10	60.20	169.20	23.04
AVERAGE DECELERATION RATE:			23.95 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/s ²)
1	60.50	162.20	24.27
2	60.50	165.80	23.75
3	60.50	159.90	24.62
4	60.20	169.10	23.05
5	60.40	164.70	23.82
6	60.20	164.60	23.68
7	60.40	160.40	24.46
8	60.30	170.70	22.91
9	60.20	164.50	23.70
10	60.30	165.10	23.69
AVERAGE DECELERATION RATE:			23.80 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	23.87 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 mph:	162.2 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 (ABS)

BRAKE TESTING

Ford Mustang Mach-E AWD

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 9:21 a.m.

DATE: September 17, 2022
TEMPERATURE: 64.2° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.80	128.00	31.06
2	61.20	129.10	31.21
3	60.00	122.70	31.56
4	61.40	127.80	31.73
5	60.20	123.10	31.67
6	59.80	119.60	32.16
7	60.30	122.50	31.93
8	60.10	122.40	31.74
9	60.00	121.70	31.82
10	60.40	125.20	31.34
AVERAGE DECELERATION RATE:			31.62 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/s ²)
1	60.90	127.90	31.19
2	61.30	125.10	32.31
3	60.10	122.70	31.66
4	61.40	128.90	31.46
5	59.90	124.50	31.00
6	60.60	125.70	31.42
7	60.10	122.30	31.77
8	60.80	128.30	30.99
9	60.20	123.20	31.64
10	60.20	125.10	31.16
AVERAGE DECELERATION RATE:			31.46 ft/s²

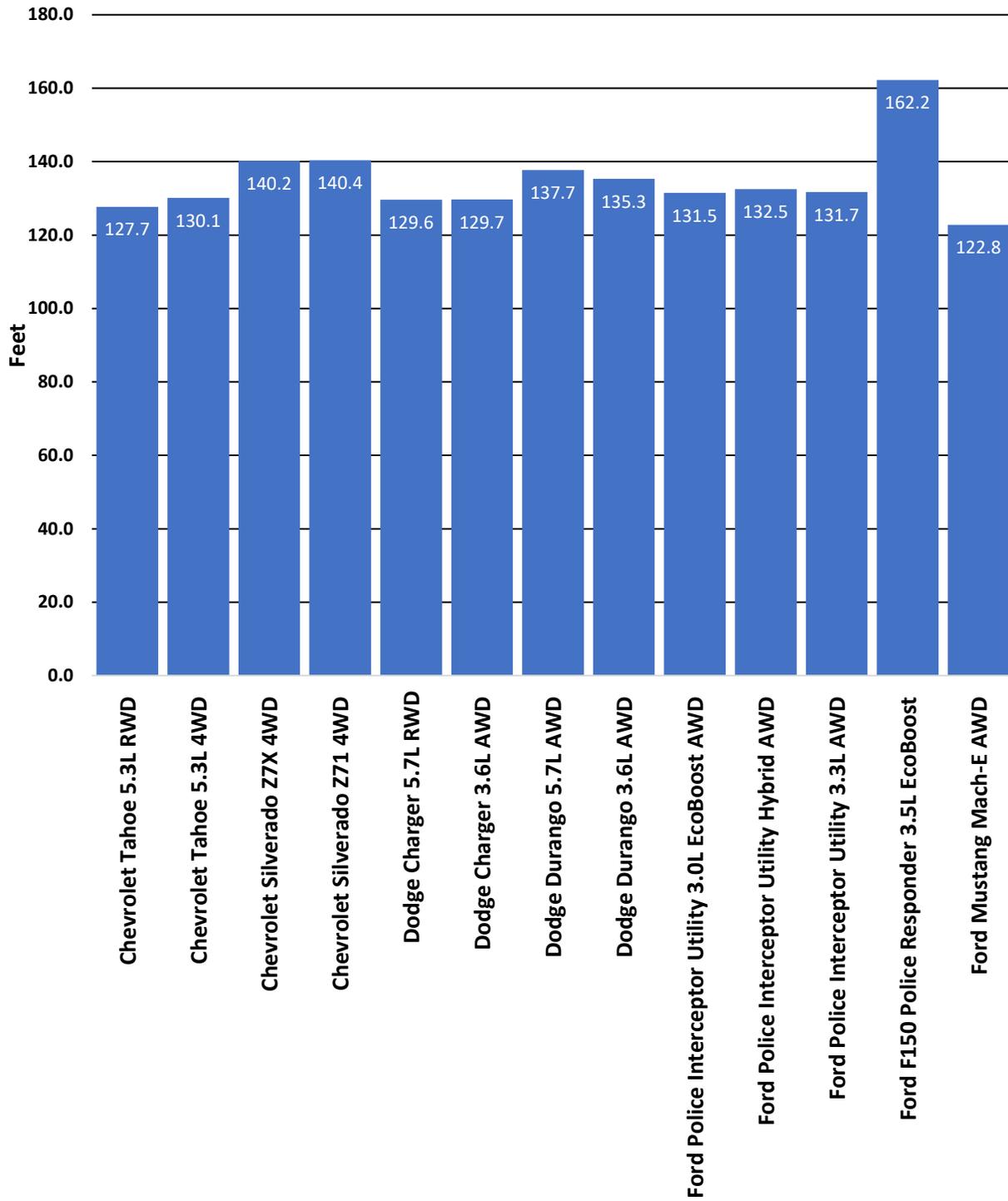
Phase III

OVERALL AVERAGE DECELERATION RATE:	31.54 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 mph:	122.8 feet

Evidence of severe fading?	No
Vehicle stopped in straight line?	Yes
Vehicle stopped within correct lane?	Yes

*All vehicles tested are equipped with Anti-lock brakes (ABS)

2023 Model Year Brake Testing Projected Stopping Distance



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 76 of this book), each category is graded on a scale from 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 five), 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.

COMMUNICATIONS

	Chevrolet Tahoe	Chevrolet Silverado	Dodge Charger	Dodge Durango	Ford Police Interceptor Utility	Ford F150 Police Responder	Mustang Mach-E AWD
COMMUNICATIONS							
Dashboard Accessibility	9.33	9.84	9.39	10.00	10.00	9.56	3.67
Trunk Accessibility	8.86	9.68	9.07	9.33	8.33	7.57	7.33
Engine Compartment	8.33	9.67	7.67	10.00	10.00	9.00	5.00
TOTAL SCORES	8.84	9.73	8.71	9.78	9.44	8.71	5.33

ERGONOMICS

	Chevrolet Tahoe	Chevrolet Silverado	Dodge Charger	Dodge Durango	Ford Police Interceptor Utility	Ford F150 Police Responder	Ford Mustang Mach-E
FRONT SEAT							
Padding	8.20	7.60	7.80	7.60	8.20	8.80	8.20
Depth of Bucket Seat	8.20	8.00	7.60	7.80	7.80	8.20	8.00
Adjustability – Front to Rear	8.60	6.80	7.80	8.20	8.00	8.20	8.20
Upholstery	8.20	7.80	7.60	7.40	7.40	8.20	8.20
Bucket Seat Design	8.00	7.80	7.60	7.60	7.80	8.00	7.60
Headroom	9.60	9.40	7.00	8.40	8.40	9.20	8.20
Seatbelts	8.60	8.20	8.60	8.80	8.40	8.60	8.20
Ease of Entry and Exit	9.20	7.60	6.80	8.20	8.40	8.20	7.80
Overall Comfort Rating	8.80	7.80	7.40	8.20	8.20	8.60	8.00
REAR SEAT							
Leg Room – Front seat back	9.00	8.80	7.40	7.80	8.00	9.00	7.00
Ease of Entry and Exit	9.00	7.80	6.40	7.60	7.80	8.80	6.60
INSTRUMENTATION							
Clarity	8.40	8.60	8.00	8.20	7.60	8.20	8.40
Placement	8.40	8.40	8.20	8.20	8.20	8.20	8.20
VEHICLE CONTROLS							
Pedals, Size, and Position	8.20	8.20	8.20	8.00	7.40	8.20	7.80
Power Window Switch	8.40	8.40	8.20	8.00	8.00	8.40	8.40
Stability/Traction Control Switch	7.80	8.40	8.20	7.60	7.80	8.20	8.00
Door Lock Switch	8.00	8.20	8.20	8.00	7.80	8.40	8.20
Outside Mirror Controls	8.40	8.20	8.20	8.00	8.00	8.60	8.40
Steering Wheel, Size, Tilt Release, and Surface	8.20	7.60	8.40	8.00	7.80	8.80	8.00
Heat/AC Vent Placement and Adjustability	8.00	8.20	8.20	8.00	7.60	8.40	8.40
Trunk Release Switch	7.40	9.00	8.60	7.60	N/A	7.33	7.40
VISIBILITY							
Front (Windshield)	9.00	8.80	8.00	8.20	8.00	9.00	8.40
Rear (Back Window)	8.00	8.60	7.60	8.00	7.40	8.60	7.00
Left Rear Quarter	7.20	7.80	7.80	7.20	7.40	7.80	7.80
Right Rear Quarter	7.40	8.00	7.80	7.00	7.40	8.00	7.80
Outside Rear-View Mirrors	8.40	8.20	8.20	8.20	8.00	8.40	7.80
TOTAL SCORES	8.33	8.16	7.84	7.92	7.87	8.40	7.92

FUEL ECONOMY

The respective auto manufacturers provided estimates for fuel economy as show below. This information has been certified by the Environment Protection Agency.

Vehicles Make/Model/Engine	E.P.A. Miles Per Gallon		
	City Label	Highway Label	Combined Label
Chevrolet Tahoe 5.3L RWD	15	19	16
Chevrolet Tahoe 5.3L 4WD	14	18	16
Chevrolet Silverado Z7X 4WD	14	17	15
Chevrolet Silverado Z71 4WD	14	17	15
Dodge Charger 3.6L AWD	18	26	21
Dodge Charger 5.7L RWD	16	25	19
Dodge Durango 3.6L AWD	18	25	21
Dodge Durango 5.7L AWD	14	22	17
Ford Police Interceptor Utility Hybrid AWD	23	24	24
Ford Police Interceptor Utility 3.0L EcoBoost AWD	17	22	19
Ford Police Interceptor Utility 3.3L AWD	17	23	19
Ford F-150 Police Responder 3.5L EcoBoost	16	20	18
Ford Mustang Mach-E AWD- total range 270 miles (40 kWh/100 mi)	90	77	84 MPGe



MOTORCYCLES

Like many law enforcement agencies, the Michigan State Police used motorcycles until late 1942 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 and Harley-Davidson 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.

To maintain consistency, motorcycle brake testing was completed on the oval at the Chelsea Proving Grounds. The oval has a different coefficient of friction than our facility at the Precision Driving Unit, which may have contributed to the overall increase in braking distances when compared to the 2021 model year motorcycles.

The motorcycle dynamics portion was again conducted at the Grattan Raceway. The Grattan Raceway provides a two-mile road course that has several different curves and elevation changes that tests the motorcycle's 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.



BMW R 1250 RT-P



MAKE & MODEL	BMW R 1250 RT-P
SALES CODE	23RP
POWERTRAIN INFORMATION	
CUBIC INCHES	76.5
LITERS	1.254
HORSEPOWER	136 bhp @ 7,750 rpm
TORQUE	105 ft./lbs @ 6,500 rpm
ALTERNATOR	23 AMP @ 1150 rpm
BATTERY	2 x 16 ah AGM no maintenance batteries 220 CCA
TRANSMISSION	Constant mesh 6-speed w/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 fully integrated ABS with traction control & ABS Pro
FUEL CAPACITY	6.6 Gallons/ 25 Liters
MANUFACTURER LIMITED TOP SPEED	136 mph
GENERAL MEASUREMENTS	
WHEELBASE	58.5 inches
LENGTH	87.5 inches
TEST WEIGHT	650 lbs.
HEIGHT	55.7 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,114 lbs.
EPA MILEAGE EST. (MPG)	
CITY	Not Provided by Manufacturer
HIGHWAY	Not Provided by Manufacturer
COMBINED	50 (WMTC)

MANUFACTURER HIGHLIGHTS	
<p>The R 1250 RT-P is the newest generation police motor derived from the K52 platform. The R 1250 RT-P model includes an unmatched list of standard features: Electronic Suspension Adjustment (ESA), ABS brakes with traction control, rain or road riding modes, heated handlebar grips, heated seat, electrically adjustable windshield, cruise control, tire pressure monitors and weather protection.</p> <p>The newest version of the BMW R 1250 RT-P is equipped with a standard, industry leading, 10.25" TFT instrument panel that displays all motorcycle performance data and a moving map navigational display. Additional new features include an all-new LED headlight system with revised front fairing. New available options include Adaptive Headlight and Enhanced Smart Phone Connectivity.</p> <p>This generation contains a multi-plate self-adjusting wet clutch that can be changed in an hour, variable valve timing, BMW-Code 3 standard 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), integrated PTT/PTPA switches, etc.</p> <p>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, ABS Pro enabling braking in corners, and additional fog lights, which also wig-wag with the headlight when there is sufficient ambient light (controlled by dashboard light sensor).</p> <p>The R 1200 RT-P has 6,000-mile oil change service intervals, comes with a 3-year / 60,000-mile limited warranty at no extra charge and now with EU4 engine management can be run on regular 87 AKI fuel</p> <p>Now a BMW Extended Service Contract is available that will extend the limited factory warranty for up to 7 years / Unlimited Mileage.</p>	

Harley-Davidson FLHTP



MAKE & MODEL	Harley-Davidson FLHTP - Electra Glide
SALES CODE	FLHTP
POWERTRAIN INFORMATION	
CUBIC INCHES	114
LITERS	1.87
HORSEPOWER SAENET	N/A
TORQUE	123 ft/lbs.
ALTERNATOR	46-50 AMP
BATTERY	405 CCA
TRANSMISSION	6 Speed
SUSPENSION TYPE (FRONT)	Showa 49 mm Dual Bending Valve
SUSPENSION TYPE (REAR)	Premium Standard Height Hand Adjustable
TURNING CIRCLE (CURB TO CURB)	N/A
TIRE SIZE, LOAD & SPEED RATING	Rear 180/65B16 M/C 81 H (Load Range 1,019@42psi) Front 130/80B-17 M/C 65 H (Load Range 639 @41psi)
GROUND CLEARANCE, MINIMUM	5.3 inches
BRAKE SYSTEM	Caliper Type 32mm 4 piston front and rear / Reflex Linked Brembo ABS
FUEL CAPACITY	6 Gallons
MANUFACTURER LIMITED TOP SPEED	110 mph
GENERAL MEASUREMENTS	
WHEELBASE	64 inches
LENGTH	94.7 inches
TEST WEIGHT	844 lbs.
HEIGHT	57.1 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,360 lbs.
EPA MILEAGE EST. (MPG)	
CITY	N/A
HIGHWAY	N/A
COMBINED	43

MANUFACTURER HIGHLIGHTS

• Mechanical Adjustable Actuation Clutch • Limited 3 year, 60,000 mile factory warranty -Police Duty Use only -Fully Transferable -Expires at 3 years or 60,000 miles, whichever comes first MODEL UNIQUE FEATURES • RDRS Rider Safety Enhancements - Cornering Enhanced ABS (C-ABS) - Cornering Enhanced Electronic Linked Braking (C-ELB) - Cornering Enhanced Traction Control System (C-TCS) - Drag-Torque Slip Control System (DSCS) - Vehicle Hold Control (VHC) - Tire Pressure Monitoring System (TPMS) • Handlebar with bar ends turned higher to provide more clearance to the operator's legs • Fan-assisted oil cooler • Batwing fairing • Floating, dual-front open brake rotors • Heated hand grips with adjustable six-setting heat control • 2-1-2 exhaust with dual tapered mufflers • Dual law enforcement blue license plate marker lamps (OEM standard) • Pivoting footboards with heel/toe shift lever • Daymaker® LED headlight • Reflex™ Linked Brembo® Brakes with ABS • 4-piston front and rear caliper • Trigger switch activation allows approx. 15 minutes of power to police emergency equipment with ignition off • Independent hazard warning switch • Emergency light switch with 4 functions and individual indicator lights for: Off, Both Front and Rear On, Front On only, Rear On only • Saddlebags with One-Touch latch, luggage locks, common with ignition key

Harley-Davidson FLHP



MAKE & MODEL	Harley-Davidson FLHP- Road King
SALES CODE	FLHP
POWERTRAIN INFORMATION	
CUBIC INCHES	114
LITERS	1.87
HORSEPOWER SAENET	N/A
TORQUE	123 ft/lbs.
ALTERNATOR	46-50 AMP
BATTERY	405 CCA
TRANSMISSION	6 Speed
SUSPENSION TYPE (FRONT)	Showa 49 mm Dual Bending Valve
SUSPENSION TYPE (REAR)	Premium Standard Height Hand Adjustable
TURNING CIRCLE (CURB TO CURB)	N/A
TIRE SIZE, LOAD & SPEED RATING	Rear 180/65B16 M/C 81 H (Load Range 1,019@42psi) Front 130/80B-17 M/C 65 H (Load Range 639 @41psi)
GROUND CLEARANCE, MINIMUM	5.3 inches
BRAKE SYSTEM	Caliper Type 32mm 4 piston front and rear / Reflex Linked Brembo ABS
FUEL CAPACITY	6 Gallons
MANUFACTURER LIMITED TOP SPEED	110 mph
GENERAL MEASUREMENTS	
WHEELBASE	64 inches
LENGTH	96.5 inches
TEST WEIGHT	842 lbs.
HEIGHT	56.3 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,360 lbs.
EPA MILEAGE EST. (MPG)	
CITY	N/A
HIGHWAY	N/A
COMBINED	43

MANUFACTURER HIGHLIGHTS	
<ul style="list-style-type: none"> • Mechanical Adjustable Actuation Clutch • Limited 3 year, 60,000 mile factory warranty -Police Duty Use only -Fully Transferable -Expires at 3 years or 60,000 miles, whichever comes first MODEL UNIQUE FEATURES • RDRS Rider Safety Enhancements - Cornering Enhanced ABS (C-ABS) - Cornering Enhanced Electronic Linked Braking (C-ELB) - Cornering Enhanced Traction Control System (C-TCS) - Drag-Torque Slip Control System (DSCS) - Vehicle Hold Control (VHC) - Tire Pressure Monitoring System (TPMS) • Handlebar with bar ends turned higher to provide more clearance to the operator's legs • Fan-assisted oil cooler • Floating, dual-front open brake rotors • 2-1-2 exhaust with dual tapered mufflers • Dual law enforcement blue license plate marker lamps (OEM standard) • Pivoting footboards with heel/toe shift lever • Reflex™ Linked Brembo® Brakes with ABS • 4-piston front and rear caliper • Trigger switch activation allows approx.15 minutes of power to police emergency equipment with ignition off • Independent hazard warning switch • Emergency light switch with 4 functions and individual indicator lights for: Off, Both Front and Rear On, Front On only, Rear On only • Saddlebags with One-Touch latch, luggage locks, common with ignition key 	

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:

**Due to inclement weather during the motorcycle dynamics testing, only four timed laps were completed during the last series, shortening the series by four laps. The four laps captured were utilized to derive the overall average.*

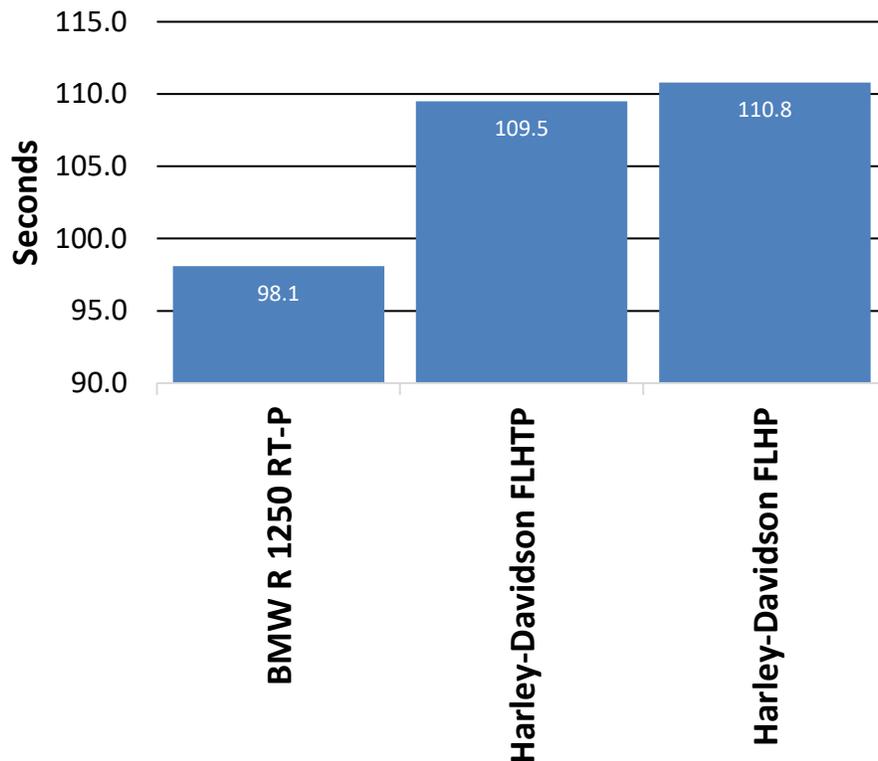
GRATTAN RACEWAY 2023 MODEL YEAR MOTORCYCLE DYNAMICS RAIN SCHEDULE SEPTEMBER 20, 2022				
	ROGERS	CUPP	TIBAUDO	MORRIS
3 p.m.	Harley-Davidson FLHP	Harley-Davidson FLHTP	BMW R 1250 RT-P	Pass
3:15 p.m.	Harley-Davidson FLHTP	Harley-Davidson FLHP	Pass	BMW R 1250 RT-P
3:30 p.m.	BMW R 1250 RT-P	Pass	Harley-Davidson FLHTP	Harley-Davidson FLHP
4 p.m.	Pass	BMW R 1250 RT-P	Harley-Davidson FLHP	Harley-Davidson FLHTP



MOTORCYCLE DYNAMICS TESTING SEPTEMBER 20, 2022

Vehicles	Drivers	Lap 1	Lap 2	Lap 3	Lap 4	Lap 5	Average
BMW R 1250 RT-P	TIBAUDO	01:38.10	01:37.79	01:37.89	01:38.93	01:38.50	01:38.24
	MORRIS	01:39.60	01:39.32	01:39.52	01:39.67	01:39.21	01:39.46
	ROGERS	01:35.93	01:35.15	01:34.43	01:35.53	01:36.61	01:35.53
	CUPP	01:38.99	01:39.71	01:38.98	01:38.81	N/A	01:39.12
Overall Average							01:38.09
Harley-Davidson FLHTP	CUPP	01:48.03	01:47.98	01:47.61	01:47.46	01:47.67	01:47.75
	ROGERS	01:47.47	01:47.78	01:47.71	01:47.32	01:47.33	01:47.52
	TIBAUDO	01:51.19	01:50.98	01:50.96	01:50.72	01:51.46	01:51.06
	MORRIS	01:51.13	01:50.88	01:51.93	01:53.09	N/A	01:51.76
Overall Average							01:49.52
Harley-Davidson FLHP	ROGERS	01:50.00	01:49.74	01:49.77	01:50.05	01:49.98	01:49.91
	CUPP	01:48.62	01:49.01	01:48.48	01:48.35	01:48.70	01:48.63
	MORRIS	01:53.42	01:52.96	01:52.43	01:52.66	01:52.56	01:52.81
	TIBAUDO	01:51.81	01:50.94	01:52.70	01:52.29	N/A	01:51.94
Overall Average							01:50.82

2023 Model Year Motorcycle Dynamics



MOTORCYCLE ACCELERATION AND 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 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.



BMW R1250 RT-P

BEGINNING TIME: 10:11 a.m.
WIND VELOCITY: 2.2 mph

TEMPERATURE: 66.3° F
WIND DIRECTION: 86°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	4.31	3.79	3.94	4.34	4.10
0-80	6.36	5.95	6.18	6.50	6.25
0-100	9.43	9.12	9.34	9.75	9.41

DISTANCE TO REACH 100 MPH: 0.16 mile **DISTANCE TO REACH 120 MPH:** 0.38 mile

TOP SPEED ATTAINED: 136 mph

DISTANCE TO REACH TOP SPEED: 2.58 miles **TIME TO REACH TOP SPEED:** 78.03 seconds

Harley-Davidson FLHTP

BEGINNING TIME: 1:49 p.m.
WIND VELOCITY: 2.9 mph

TEMPERATURE: 79.2° F
WIND DIRECTION: 164°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	5.28	5.45	5.07	5.43	5.31
0-80	9.17	9.59	8.90	9.66	9.33
0-100	17.59	20.92	16.41	21.29	19.05

DISTANCE TO REACH 100 MPH: 0.38 mile **DISTANCE TO REACH 120 MPH:** N/A

TOP SPEED ATTAINED: 110 mph

DISTANCE TO REACH TOP SPEED: 0.92 mile **TIME TO REACH TOP SPEED:** 36.79 seconds

TEST LOCATION: Chelsea Proving Grounds

DATE: September 17, 2022

Harley-Davidson FLHP

BEGINNING TIME: 12:08 p.m.
WIND VELOCITY: 4.4 mph

TEMPERATURE: 74.9° F
WIND DIRECTION: 245°

SPEEDS	RUN 1	RUN 2	RUN 3	RUN 4	AVERAGE (seconds)
0-60	5.24	5.41	5.63	5.43	5.43
0-80	9.04	9.50	9.51	9.24	9.32
0-100	17.11	20.00	17.93	17.43	18.12

DISTANCE TO REACH 100 MPH: 0.35 mile

DISTANCE TO REACH 120 MPH: N/A

TOP SPEED ATTAINED: 110 mph

DISTANCE TO REACH TOP SPEED: 0.61 mile

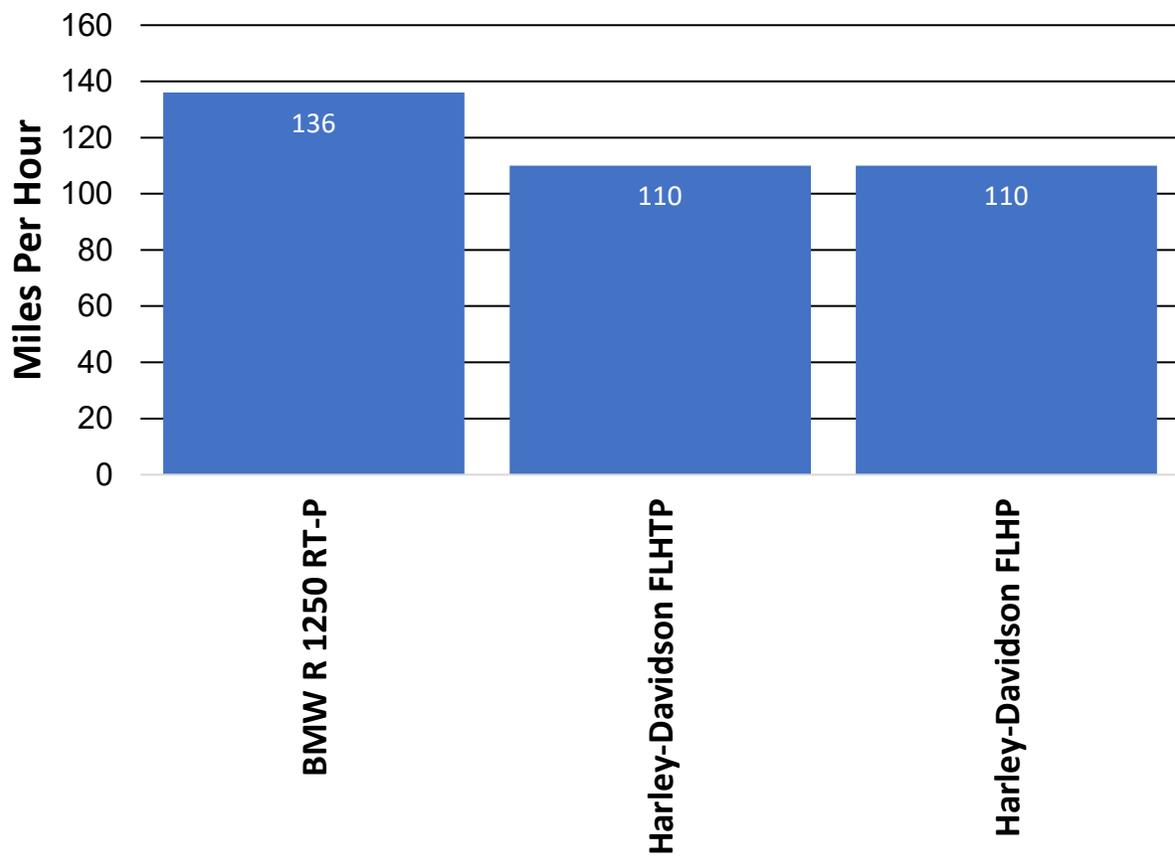
TIME TO REACH TOP SPEED: 26.68 seconds



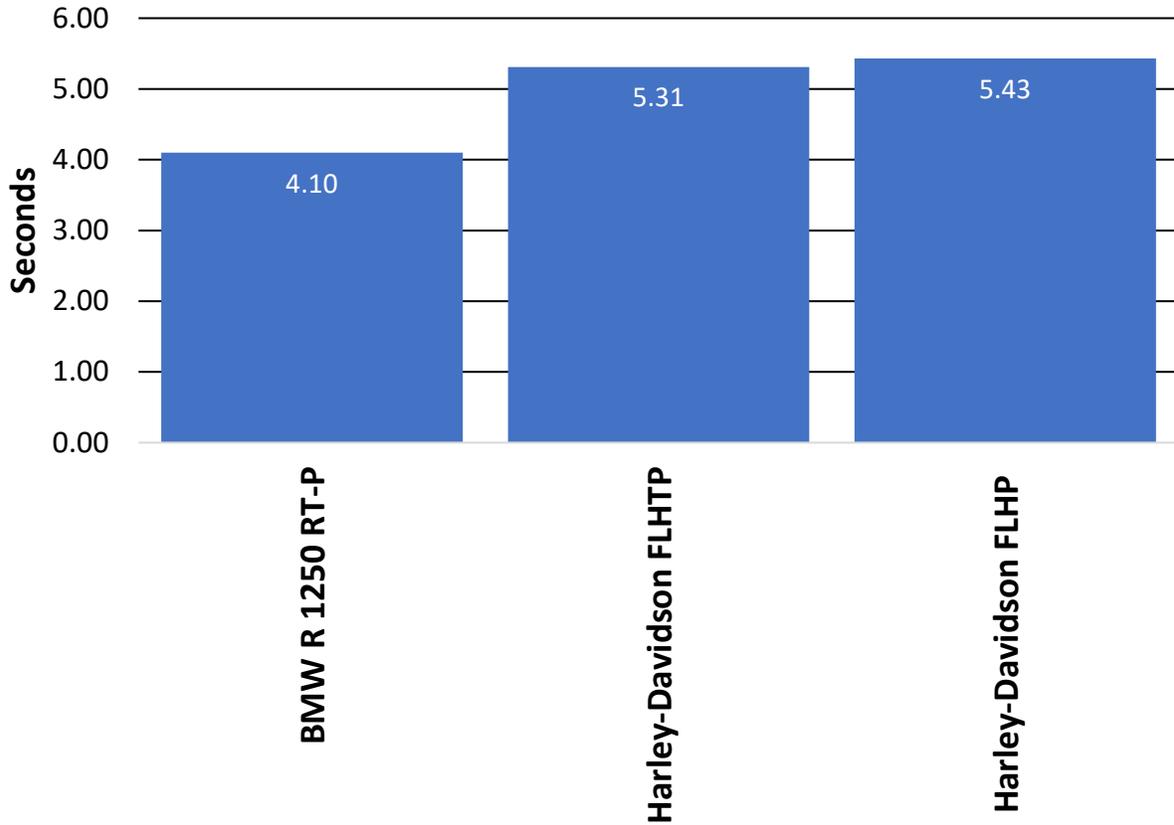
**SUMMARY OF MOTORCYCLE
ACCELERATION & TOP SPEED
SEPTEMBER 17, 2022**

	BMW R 1250 RT-P	Harley- Davidson FLHTP	Harley- Davidson FLHP
ACCELERATION (seconds)			
0-20 mph	1.39	1.40	1.45
0-30 mph	2.00	2.06	2.08
0-40 mph	2.54	2.89	2.90
0-50 mph	3.11	3.98	4.14
0-60 mph	4.10	5.31	5.43
0-70 mph	4.95	7.02	7.19
0-80 mph	6.25	9.33	9.32
0-90 mph	7.48	12.75	12.77
0-100 mph	9.41	19.05	18.12
TOP SPEED (mph)	136	110	110
DISTANCE TO REACH (miles)			
100 mph	0.16	0.38	0.35
120 mph	0.38	N/A	N/A
Top Speed	2.58	0.92	0.61

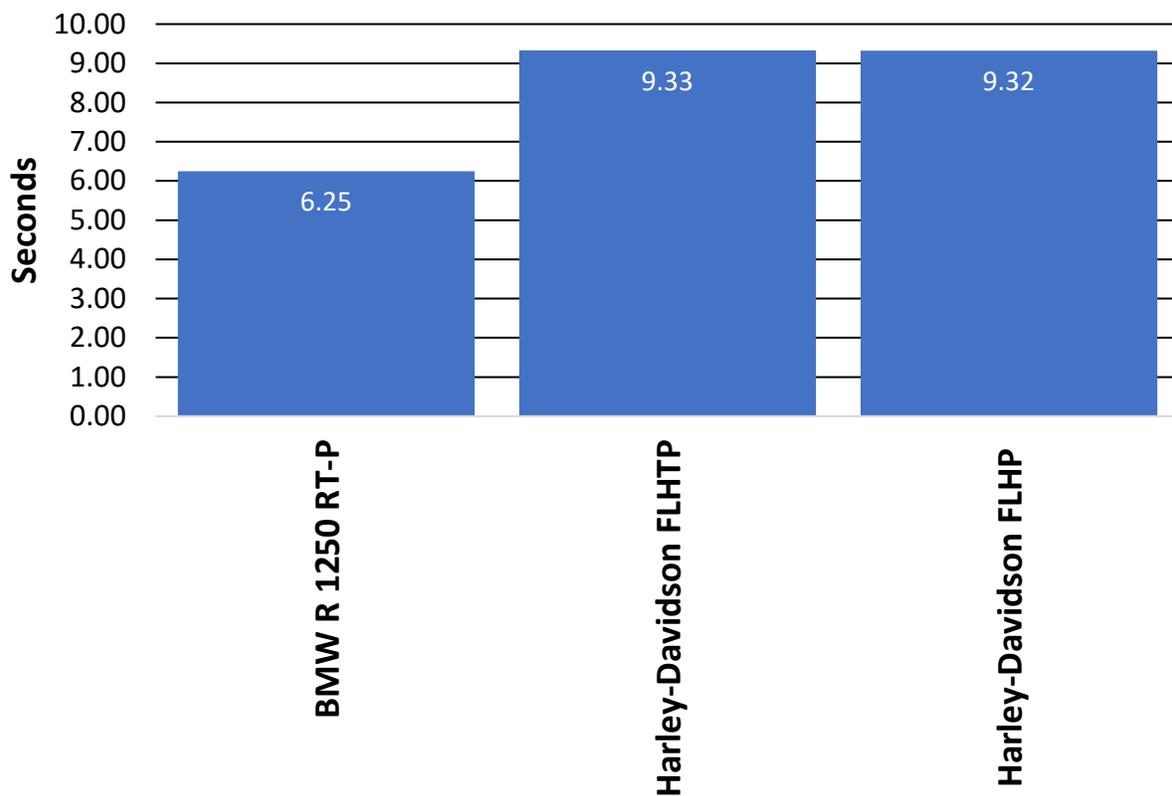
2023 Model Year Motorcycle Top Speed Comparison Top Speed Attained



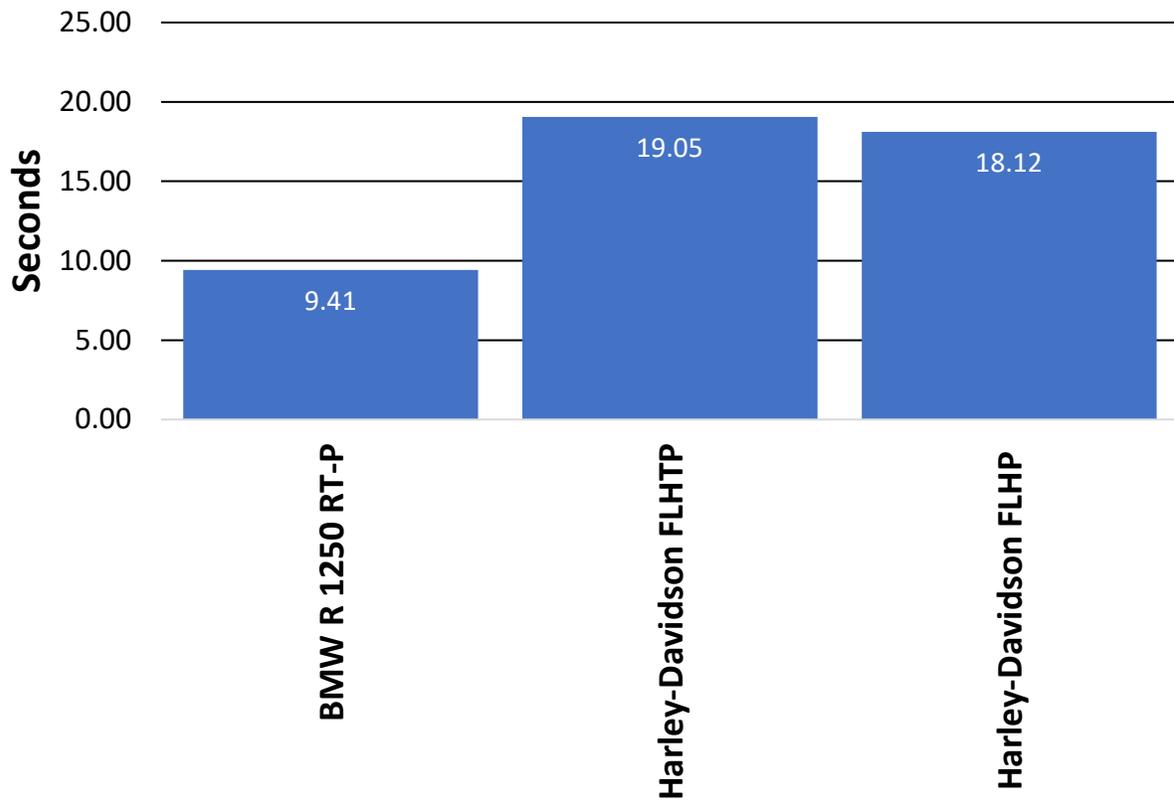
2023 Model Year Motorcycle Acceleration Comparison Acceleration Times 0-60 mph



2023 Model Year Motorcycle Acceleration Comparison Acceleration Times 0-80 mph



2023 Model Year Motorcycle Acceleration Comparison Acceleration Times 0-100



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:

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

EXAMPLE:

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

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

Once a motorcycle's average deceleration rate has been determined, it is possible to calculate the approximate 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:

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

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

BRAKE TESTING

BMW R 1250 RT-P

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 10:28 a.m.

DATE: September 17, 2022
TEMPERATURE: 68.4° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.40	135.50	28.96
2	60.30	134.80	29.01
3	60.00	129.00	30.02
4	60.30	133.00	29.41
5	60.70	135.00	29.36
6	60.50	132.90	29.62
7	59.80	138.80	27.71
8	60.10	133.70	29.06
9	60.40	132.10	29.70
10	60.50	141.30	27.86
AVERAGE DECELERATION RATE:			29.07 ft/s ²

(One cool down lap at 45 mph)

Phase II

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	60.40	135.50	28.96
2	60.10	132.80	29.26
3	60.00	130.90	29.58
4	60.10	133.30	29.15
5	60.30	142.30	27.48
6	59.90	138.10	27.95
7	59.80	129.70	29.66
8	59.40	136.80	27.74
9	60.10	133.10	29.19
10	59.90	131.60	29.33
AVERAGE DECELERATION RATE:			28.83 ft/s ²

Phase III

OVERALL AVERAGE DECELERATION RATE:	28.95 ft/s ²
PROJECTED STOPPING DISTANCE FROM 60 mph:	133.8 feet

Evidence of severe fading?	No
Motorcycle stopped in straight line?	Yes
Motorcycle stopped within correct lane?	Yes

*All motorcycles tested are equipped with Anti-lock brakes (ABS)

BRAKE TESTING

Harley-Davidson FLHTP

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 2:05 p.m.

DATE: September 17, 2022
TEMPERATURE: 78.7° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	58.40	129.20	28.39
2	60.80	143.20	27.77
3	59.70	147.60	25.97
4	60.50	142.00	27.73
5	59.70	139.90	27.40
6	60.00	138.90	27.88
7	60.20	143.70	27.13
8	60.30	143.00	27.35
9	59.70	143.40	26.73
10	59.20	140.80	26.77
AVERAGE DECELERATION RATE:			27.31 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/s ²)
1	60.20	141.00	27.65
2	60.10	140.10	27.73
3	59.70	139.80	27.42
4	60.70	144.70	27.39
5	59.80	145.00	26.53
6	59.40	138.50	27.40
7	60.40	139.50	28.13
8	60.30	140.70	27.80
9	60.10	139.70	27.81
10	60.40	143.40	27.36
AVERAGE DECELERATION RATE:			27.52 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	27.42 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 mph:	141.2 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 (ABS)

BRAKE TESTING

Harley-Davidson FLHP

TEST LOCATION: Chelsea Proving Grounds
BEGINNING TIME: 12:26 p.m.

DATE: September 17, 2022
TEMPERATURE: 76.4° F

Phase I

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

Stop #	Initial Velocity (mph)	Stopping Distance (feet)	Deceleration Rate (ft/s ²)
1	59.90	140.40	27.49
2	59.10	134.00	28.04
3	60.60	144.30	27.37
4	59.90	141.60	27.25
5	60.20	146.40	26.63
6	60.50	141.50	27.82
7	60.20	146.70	26.57
8	59.70	141.40	27.11
9	59.60	138.90	27.51
10	60.60	146.20	27.02
AVERAGE DECELERATION RATE:			27.28 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/s ²)
1	60.00	142.90	27.10
2	61.40	144.90	27.98
3	59.90	143.40	26.91
4	60.30	138.20	28.30
5	60.40	147.60	26.59
6	61.00	150.50	26.59
7	61.20	142.10	28.35
8	59.90	144.70	26.67
9	60.20	142.00	27.45
10	61.10	145.20	27.65
AVERAGE DECELERATION RATE:			27.36 ft/s²

Phase III

OVERALL AVERAGE DECELERATION RATE:	27.32 ft/s²
PROJECTED STOPPING DISTANCE FROM 60 mph:	141.7 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 (ABS)

2023 Motorcycle Brake Testing Projected Stopping Distance

