


POLICE VEHICLE EVALUATION Model Year 2017



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



2017 Model Year
Police Vehicle Evaluation Program

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A large, semi-transparent watermark of the Michigan State Police badge is centered on the page. The badge is blue with a yellow border and features a central seal. The word "MICHIGAN" is written in yellow across the top, and "STATE POLICE" is written in yellow across the bottom. The central seal depicts a landscape with a sun, a river, and a tree, surrounded by the text "THE GREAT LAKES" and "1820".

**TEST VEHICLE DESCRIPTIONS
AND PHOTOGRAPHS**

MOTORCYCLES

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

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

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

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

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



BMW R1200 RT-P



MAKE & MODEL	BMW R 1200 RT-P
SALES CODE	16RP
POWERTRAIN INFORMATION	
CUBIC INCHES	71.4
LITERS	1.170
HORSEPOWER SAENET	125 bhp @ 7,750 RPM
ALTERNATOR	540W
TORQUE	92 @ 6,500 RPM
BATTERY	2 x 16 Ah (AGM no-maintenance batteries)
TRANSMISSION	Constant Mesh 6-Speed with Helical Cut Gears
SUSPENSION TYPE (FRONT)	BMW Telelever, 37 mm stanchions, central spring strut
SUSPENSION TYPE (REAR)	BMW Paralever; travel related damping single strut
TURNING CIRCLE (CURB TO CURB)	16 ft.
TIRE SIZE, LOAD & SPEED RATING	120-70 ZR 17 (Front) / 180-55 ZR 17 (Rear)
GROUND CLEARANCE, MINIMUM	5.2 inches
BRAKE SYSTEM	BMW partial-integral ABS with traction control
FUEL CAPACITY	6.6 Gallons/25 Liters
GENERAL MEASUREMENTS	
WHEELBASE	58.5 inches
LENGTH	87.5 inches
TEST WEIGHT	650 lbs.
HEIGHT	55.7 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	1,091 lbs.
EPA MILEAGE EST. (MPG)	
CITY	60 MPG (@ 44 mph)
HIGHWAY	44 MPG (@ 75 mph)
COMBINED	Not Provided by Manufacturer

MANUFACTURER HIGHLIGHTS

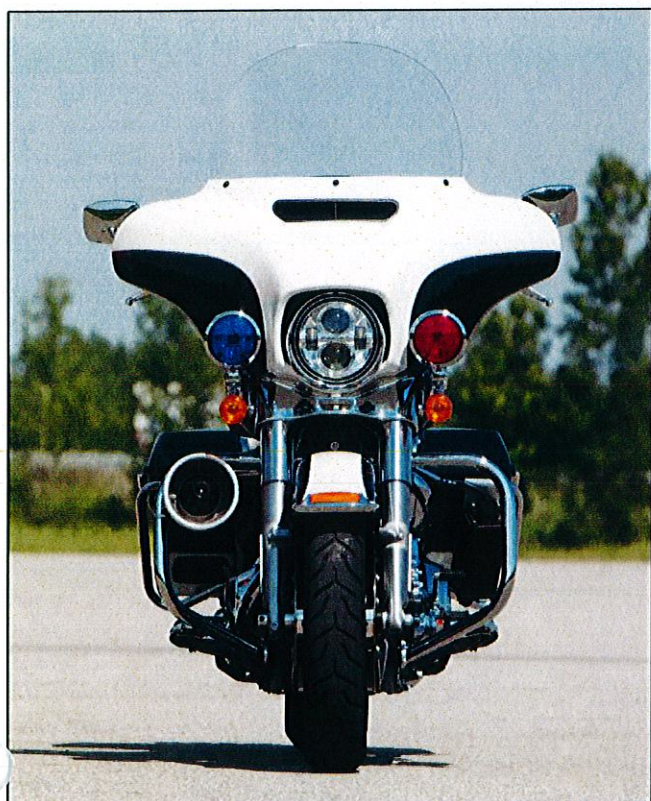
The R 1200 RT-P is the new generation police motor derived from the K52 platform, inheriting all of the platform improvements of the civil model including standard ABS brakes with traction control, rain or road riding modes and heated handlebar grips.

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

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

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

Harley-Davidson FLHTP Electra Glide



MAKE & MODEL	Harley-Davidson FLHTP (Electra Glide)
SALES CODE	Not Provided by Manufacturer

POWERTRAIN INFORMATION

CUBIC INCHES	107 CID
LITERS	1746 CC
HORSEPOWER SAENET	N/A
ALTERNATOR	48 Amp (producing approximately 28 amps at idle)
TORQUE	111.4 @ 3250 RPM
BATTERY	12VDC, 28 Amp/Hour, 270 CCA
TRANSMISSION	6 Speed Manual / Assist and Slip Wet 9 Plate Clutch
SUSPENSION TYPE (FRONT)	Hydraulic 49 mm Telescopic Forks with Showa® Dual Bending Valve Technology improving dampening performance
SUSPENSION TYPE (REAR)	Swing Arm with Hand Adjustable Emulsion Rear Shocks
TURNING CIRCLE (CURB TO CURB)	<17'
TIRE SIZE, LOAD & SPEED RATING	Dunlop D408F 130/80B17 (65H) (Front) Dunlop D407T 180/65B16 (81H) (Rear)
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Hydraulic Disc/Reflex™ Electronically Linked with ABS (Dual Front Floating Rotors – Single Fixed Rear)
FUEL CAPACITY	6.0 Gallons/22.71 Liters

GENERAL MEASUREMENTS

WHEELBASE	64 inches
LENGTH	96.5 inches
TEST WEIGHT	845 lbs.
HEIGHT	56.3 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	GVWR – 1,360 lbs. / Payload – 515 lbs.

EPA MILEAGE EST. (MPG)

CITY	Not Provided By Manufacturer
HIGHWAY	Not Provided By Manufacturer
COMBINED	45 MPG

MANUFACTURER HIGHLIGHTS

- 107 CID Milwaukee 8™ Engine: pushrod-operated, overhead valves with hydraulic, self-adjusting lifters, four valves per cylinder and featuring EITMS (Engine Idle Temperature Management System), Compression ratio: 10.0:1, Electronic Sequential Port Fuel Injection System (ESPFI), Single Cam design
- Fan-Assisted Oil Cooler
- Hydraulically Actuated Clutch with Assist and Slip 9 Plate Wet Clutch
- Showa® Dual Bending Valve Technology Front Suspension with 117mm of Travel, Larger pistons improve dampening performance over the range of suspension travel.
- Hand Adjustable Read Emulsion Shocks
- Daymaker™ LED Headlight
- Stealth Lighting Capable (rider controlled-disables all lights except brake and instrumentation)
- Cruise Control
- Emergency Equipment Power for 30 minutes with Ignition OFF or LOCKED
- Digital Speed Readout with Speed Capture
- Gear Indicator
- Polycarbonate Windshield designed to breakaway with minimal impact force
- One-Touch Saddlebag Lid Latches
- Pivoting Footboards
- Reflex™ electronically linked brake system with ABS (delinked below approximately 25 mph)
- Dunlop Multi-Tread Bead Retention Tires
- Long Stem True Vision Mirrors
- 2 Year Unlimited Mileage OE Warranty

Harley-Davidson FLHP Road King



MAKE & MODEL	Harley-Davidson FLHP (Road King)
SALES CODE	Not Provided by Manufacturer

POWERTRAIN INFORMATION

CUBIC INCHES	107 CID
LITERS	1746 CC
HORSEPOWER SAENET	Not Provided by Manufacturer
ALTERNATOR	48 AMP (producing approximately 28 Amps at idle)
TORQUE	111.4 @ 3250 RPM
BATTERY	12VDC, 28 Amp/Hour, 270 CCA
TRANSMISSION	6 Speed Manual / Assist and Slip Wet 9 Plate Clutch
SUSPENSION TYPE (FRONT)	Hydraulic 49 mm Telescopic Forks with Showa® Dual Bending Valve Technology improving dampening performance
SUSPENSION TYPE (REAR)	Swing Arm with Hand Adjustable Emulsion Rear Shocks
TURNING CIRCLE (CURB TO CURB)	<17'
TIRE SIZE, LOAD & SPEED RATING	Dunlop D408F 130/80B17 (65H) (Front) Dunlop D407T 180/65B16 (81H) (Rear)
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Hydraulic Disc/Reflex™ Electronically Linked with ABS (Dual Front Floating Rotors – Single Fixed Rear)
FUEL CAPACITY	6.0 Gallons/22.71 Liters

GENERAL MEASUREMENTS

WHEELBASE	64 inches
LENGTH	96.5 inches
TEST WEIGHT	845 lbs.
HEIGHT	56.3 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	GVWR – 1,360 lbs. / Payload – 515 lbs.

EPA MILEAGE EST. (MPG)

CITY	Not Provided by Manufacturer
HIGHWAY	Not Provided by Manufacturer
COMBINED	45 MPG

MANUFACTURER HIGHLIGHTS

- 107 CID Milwaukee 8™ Engine: pushrod-operated, overhead valves with hydraulic, self-adjusting lifters, four valves per cylinder and featuring EITMS (Engine Idle Temperature Management System), Compression ratio: 10.0:1, Electronic Sequential Port Fuel Injection System (ESPFI) < Single Cam design, Air and Oil cooled.
- Fan-Assisted Oil Cooler
- Hydraulically Actuated Clutch with Assist and Slip 9 Plate Wet Clutch
- Showa® Dual Bending Valve Technology Front Suspension with 117mm of Travel, Larger pistons improve dampening performance over the range of suspension travel
- Hand Adjustable Rear Emulsion Shocks
- Dual Halogen Headlight
- Stealth Lighting Capable (rider controlled-disables all lights except brake and instrumentation)
- Cruise Control
- Emergency Equipment Power for 30 minutes with Ignition OFF or LOCKED
- Digital Speed Readout with Speed Capture
- Gear Indicator
- Polycarbonate Windshield designed to breakaway with minimal impact force
- One-Touch Saddlebag Lid Latches
- Pivoting Footboards
- Reflex™ electronically linked brake system with ABS (delinked below approximately 25 mph)
- Dunlop Multi-Tread Bead Retention Tires
- Long Stem True Vision Mirrors
- 2 Year Unlimited Mileage OE Warranty

Harley-Davidson FLHTP Electra Glide Stage 3



MAKE & MODEL	Harley-Davidson FLHTP (Electra Glide) Stage 3 Engine
SALES CODE	Not Provided by Manufacturer
POWERTRAIN INFORMATION	
CUBIC INCHES	114 CID
LITERS	1868 CC
HORSEPOWER SAENET	Not Provided by Manufacturer
ALTERNATOR	48 AMP (producing approximately 28 Amps at idle)
TORQUE	124+ @ 3250 RPM
BATTERY	12VDC, 28 Amp/Hour, 270 CCA
TRANSMISSION	6 Speed Manual / Wet 9 Plate Assist and Slip Clutch
SUSPENSION TYPE (FRONT)	Hydraulic 49 mm Telescopic Forks with Showa® Dual Bending Valve Technology improving dampening performance
SUSPENSION TYPE (REAR)	Swing Arm with Hand Adjustable Emulsion Rear Shocks
TURNING CIRCLE (CURB TO CURB)	<17'
TIRE SIZE, LOAD & SPEED RATING	Dunlop D408F 130/80B17 (65H) (Front) Dunlop D407T 180/65B16 (81H) (Rear)
GROUND CLEARANCE, MINIMUM	5.1 inches
BRAKE SYSTEM	Hydraulic Disc/Reflex™ Electronically Linked with ABS (Dual Front Floating Rotors – Single Fixed Rear)
FUEL CAPACITY	6.0 Gallons/22.71 Liters
GENERAL MEASUREMENTS	
WHEELBASE	64 inches
LENGTH	96.5 inches
TEST WEIGHT	845 lbs.
HEIGHT	56.3 inches
MAXIMUM PAYLOAD CAPACITY (INCLUDING PASSENGERS)	GVWR – 1,360 lbs. / Payload – 515 lbs.
EPA MILEAGE EST. (MPG)	
CITY	Not Provided by Manufacturer
HIGHWAY	Not Provided by Manufacturer
COMBINED	Not Provided by Manufacturer

MANUFACTURER HIGHLIGHTS

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

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

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

- Fan Assisted Oil Cooler
- Hydraulically Actuated Assist and Slip 9 Plate Wet Clutch
- Showa® Dual Bending Valve Technology Front Suspension with 117mm of travel, larger pistons improve dampening performance over the range of suspension travel
- Hand Adjustable Rear Emulsion Shocks
- Daymaker™ LED Headlight
- Stealth Lighting Capable (rider controlled-disables all lights except brake and instrumentation)
- Cruise Control
- Emergency Equipment Power for 30 minutes with Ignition OFF or LOCKED

- Digital Speed Readout with Speed Capture
- Gear Indicator
- Polycarbonate Windshield designed to breakaway with minimal impact force
- One-Touch Saddlebag Lid Latches
- Pivoting Footboards
- Reflex™ electronically linked brake system with ABS (delinked below approximately 25 mph)
- Dunlop Multi-Treat Bead Retention Tires
- Long Stem True Vision Mirrors
- 2 Year Unlimited Mileage OE Warranty