Empulse® TT

2016 Rider's Manual

2016 RIDER'S MANUAL
EMPULSE® TT

Printed in USA.

2016 VICTORY EMPULSE TT Rider’s Manual
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Here at POLARIS we proudly produce an exciting line of utility and recreational products:

- Snowmobiles
- All-terrain vehicles (ATVs)
- Low emission vehicles (LEVs)
- RANGER® utility vehicles
- RZR® sport vehicles
- VICTORY® motorcycles
- GEM® electric vehicles
- BRUTUS® work vehicles
- SLINGSHOT® three wheel motorcycles
- INDIAN® motorcycles
- POLARIS POWER® generators
- POLARIS DEFENSE® combat vehicles

For the safe and enjoyable operation of your vehicle, be sure to follow the instructions and recommendations in this rider’s manual. Keep this manual with the motorcycle, especially when ownership changes. If your rider’s mannual is misplaced or damaged, please purchase a replacement from your VICTORY dealer.

All references in this manual to RIGHT, LEFT, FRONT or REAR are from the operator’s perspective when seated in a normal riding position. If you have questions about the operation or maintenance of your motorcycle after you've read this manual, please see your VICTORY dealer. To locate the nearest authorized VICTORY dealer, call 1-877-737-7172 or visit www.victorymotorcycles.com.

VICTORY motorcycles comply with all federal, state, and local safety and emission regulations for the area of intended sale.

SAFETY TERMS AND SIGNAL WORDS

The following signal words and symbols appear throughout this manual and on your vehicle. Your safety and the safety of others is involved when these words and symbols are used. Become familiar with their meanings before reading the manual.

 The safety alert symbol indicates a potential personal injury hazard.

⚠ DANGER

A DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

⚠ WARNING

A WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION! A CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

NOTICE: A NOTICE indicates a situation that could result in property damage.

 The Prohibition Safety Sign indicates an action NOT to take in order to avoid a hazard.

 The Mandatory Action Sign indicates an action that NEEDS to be taken to avoid a hazard.

INTRODUCTION

ABOUT THE RIDER'S MANUAL

⚠ WARNING

Failure to follow recommended precautions and procedures could result in severe injury or death. Always heed all safety precautions and follow all operation, inspection and maintenance procedures outlined in this manual.

This rider's manual contains information that is essential to safe riding and proper maintenance of your VICTORY motorcycle. Anyone who uses the motorcycle (operators and passengers) must read the rider's manual before riding. Carefully read and understand the information found in the Safety section. Understand and follow the procedures outlined in the Maintenance section to keep your VICTORY motorcycle in top condition on the road or in storage. Bring the manual with you when you ride. Following the precautions and procedures in the manual will add to your enjoyment and help keep you riding safely. If you lose or damage this manual, you can purchase a new one through any authorized VICTORY dealer. The rider's manual should be considered part of the motorcycle and remain with it if sold.

SAFETY
WARNING

⚠ WARNING

Improper vehicle use can result in SEVERE INJURY or DEATH.

NEVER Operate:

- If you are under the age of 16 and without a driver's license with motorcycle endorsement.
- Under the influence of drugs or alcohol.
- Off-road.
- With more than one passenger (motorcycle must be equipped with passenger foot pegs).
- With weight that exceeds maximum weight rating.

ALWAYS:

- Wear a helmet, eye protection, gloves, long-sleeve shirt, long pants, and over-the-ankle boots.
- Make sure any passenger reads and understands all safety labels.
- Be aware of your surroundings and driving conditions.
- Keep both hands on the handlebars and both feet on the footrests when riding.
- Use only genuine VICTORY accessories designed for your model.

READ THE RIDER'S MANUAL. FOLLOW ALL INSTRUCTIONS AND WARNINGS.

Safety training is a top priority for POLARIS. POLARIS strongly encourages you to take a rider education course from the Motorcycle Safety Foundation or another qualified instructor. The course will help you develop or refresh your expertise in safe riding habits through instruction and riding. For information on Motorcycle Safety Foundation rider education courses in your area, call 1-800- 446-9227 or visit their home page at www.msf-usa.org.

SAFE RIDING PRACTICES

⚠ WARNING

Improper use of this motorcycle can result in serious injury or death to you, your passenger and others. To minimize the risk of injury, read and understand the information contained in this section before operating the motorcycle. This section contains safety information specific to the VICTORY motorcycle, as well as information about general motorcycle safety. Anyone who rides the motorcycle (operators and passengers) must follow these safety precautions.

Motorcycling has inherent risks:

You can minimize risk, but you can't eliminate it completely. Even if you are an experienced motorcycle operator or passenger, read all of the safety information in this manual before operating the motorcycle.

- Take a rider education course from the Motorcycle Safety Foundation or another qualified instructor. The course will help you develop or refresh your expertise in safe riding habits through instruction and riding. For information on Motorcycle Safety Foundation rider education courses in your area, call 1-800-446-9227 or visit their web site at www.msfusa.org.
- Read and understand all information in this rider's manual.
- Observe all maintenance requirements specified in this manual. For assistance, see the VICTORY Service Manual or your authorized VICTORY dealer.

DESIGN CHARACTERISTICS

Design characteristics affect how you should ride the VICTORY motorcycle:

- The motorcycle is designed for on-road use with one rider and one passenger. See the manufacturer's label (on the left side of the frame by the suspension forks). The label contains the Vehicle Identification Number (VIN) and Gross Vehicle Weight Rating (GVWR) and Gross Axle Weight Rating (GAWR) information. Never exceed the GVWR or the GAWR.
- Riding with a passenger, or carrying weight exceeding the maximum weight rating can make handling difficult, which could cause loss of control.
- During the first 600 miles (966 km) of operation, follow all break-in procedures, see page 54. Failure to do so can result in serious transmission damage.
- Some VICTORY motorcycles include saddlebags, a windshield, a trunk, luggage racks or a passenger backrest as standard equipment. To maintain stability, be prepared to reduce the operating speed of motorcycles equipped with these items.

GENERAL SAFE RIDING PRACTICES

Follow these general safe riding practices:

- Before each ride, perform the pre-ride inspections, see page 45.
- Until you're thoroughly familiar with the motorcycle and all of its controls, practice riding where there is little or no traffic. Practice riding at a moderate speed on various road surfaces and in different weather conditions.
- Know your skills and limits, and ride within them.
- Allow only licensed, experienced operators to ride your motorcycle, but only after they have become familiar with its controls and operation. Make sure all riders read and understand this rider’s manual before riding.
- Do not ride when you're fatigued, ill or under the influence of alcohol, prescription drugs, over-the-counter drugs, or any other drugs. Fatigue, illness, alcohol, and drugs can cause drowsiness, loss of coordination, and loss of balance. They can also affect your awareness and judgment.
- If your motorcycle operates abnormally, correct the problem immediately. See the VICTORY Service Manual or an authorized VICTORY dealer.
- Ride defensively, as if you are invisible to other motorists, even in broad daylight. A motorist's failure to see or recognize a motorcycle is the leading cause of automobile/motorcycle accidents. Ride where you're clearly visible to other motorists, and observe their behavior carefully.
- Be especially cautious at intersections, as these are the most likely places for an accident.
- To prevent loss of control, keep your hands on the handlebars and your feet on the footrests.
- Do not move or operate the motorcycle with the steering locked (if equipped), as the severely restricted steering could result in loss of control.
- Obey the speed limit and adjust your speed and riding technique based on road, weather, and traffic conditions. As you travel faster, the influence of all other conditions increases, which can affect the motorcycle's stability and increase the possibility of losing control.

REDUCE SPEED

Reduce speed when:

- The road has potholes, or is otherwise rough or uneven.
- The road contains sand, dirt, gravel, or other loose substances.
- The road is wet, icy, or oily.
- The road contains painted surfaces, manhole covers, metal grating, railway crossings or other slippery surfaces.
- The weather is windy, rainy, or otherwise causing slippery or rapidly changing conditions.
- Traffic is heavy, congested, not allowing sufficient space between vehicles, or otherwise not flowing smoothly.
- You are being passed in either direction by a large vehicle that may produce a wind blast in its wake.

Be aware of the following braking facts and practices:

- To maximize braking effectiveness, use the front and rear brakes together.
- The rear brake provides 30% of the motorcycle's stopping power, at most. Use the front and rear brakes together.
- To avoid skidding, apply the brakes gradually when the road is wet or rough, or contains loose or other slippery substances.
- If possible, avoid applying the brakes while making a turn. Motorcycle tires have less traction during turns, so braking will increase the possibility of skidding. Bring the motorcycle to the upright position before applying the brakes.
- When approaching a curve, choose a speed and lean angle that allows you to pass through the curve in your own lane without applying the brakes. Excessive speed, improper lean angle, or braking in a curve can cause loss of control.
- Ground clearance is reduced when the motorcycle leans. Do not allow components to contact the road surface when leaning the motorcycle in a curve, as this could cause loss of control.
- Retract the sidestand fully before riding. If the sidestand is not fully retracted, it could contact the road surface and cause loss of control.
- Do not tow a trailer. Towing a trailer can make the motorcycle hard to handle.

CARRYING A PASSENGER

Do not carry a passenger unless the motorcycle is equipped with a passenger seat and passenger footrests.

To carry a passenger safely:

- Do not exceed the gross vehicle weight rating (GVWR). See the manufacturer's label (on the left side of the frame by the suspension forks).
- If necessary, adjust the rear shock preload. See page 51. Improper preload adjustment can make your motorcycle hard to handle and can cause loss of control.
- Before riding, be sure your passenger is familiar with safe riding procedures. An inexperienced passenger may distract you or make movements that cause instability.
- Direct the passenger to hold onto the passenger hand holds on either side of the passenger seat with both hands and to keep both feet on the passenger footrests. Do not carry a passenger who cannot place both feet firmly on the passenger footrests. A passenger who rides improperly can shift body weight erratically and cause instability.
- Adjust your riding style to compensate for the differences in handling, acceleration, and braking caused by the additional weight of the passenger.

PROTECTIVE APPAREL

Wear protective apparel to decrease the risk of injury and increase riding comfort.

- Always wear a helmet that meets or exceeds established safety standards. Approved helmets in the USA and Canada bear a U.S. Department of Transportation (DOT) label. Laws in some areas require that you wear an approved helmet. Head injuries are the leading cause of fatalities in accidents involving motorcycles. Statistics prove that an approved helmet is the most effective protection in preventing or reducing head injuries.
- Wear eye protection to protect eyes from wind or airborne particles and objects. Laws in some areas require that you wear eye protection. VICTORY recommends that you wear approved Personal Protective Equipment (PPE) bearing markings such as VESC 8, V-8, Z87.1, or CE. Make sure protective eye wear is kept clean.
- All riders should wear bright or light-colored and/or reflective clothing to improve visibility to other motorists. A motorist's failure to see or recognize a motorcycle is the leading cause of automobile/motorcycle accidents.
- Wear gloves, a jacket, heavy boots, and long pants to prevent or reduce injury from abrasions, lacerations, or burns should the motorcycle fall. Wear boots with low heels, as high heels can catch on pedals or footrests. The combination of boots and pants should completely cover legs, ankles, and feet, protecting skin from system heat.
- Do not wear loose, flowing clothing or long boot laces, as they can catch on handlebars, levers or footrests, or they can become entangled in the wheels, causing loss of control and serious injury.

GROSS VEHICLE WEIGHT RATING (GVWR)

⚠ WARNING

Exceeding the gross vehicle weight rating of your motorcycle can reduce stability and handling and could cause loss of control. NEVER exceed the GVWR of your motorcycle.

The maximum load capacity of your motorcycle is the maximum weight you may add to your motorcycle without exceeding the GVWR. This capacity is determined by calculating the difference between your motorcycle's GVWR and wet weight.

Refer to the specification section (page 125) or the Manufacturing Information/ VIN label on the motorcycle frame for model-specific information. See page 18.

When determining the weight you will be adding to your motorcycle, and to ensure you do not exceed the maximum load capacity, include the following:

- operator body weight
- passenger body weight
- weight of all riders' apparel and items in or on apparel
- weight of any accessories and their contents
- weight of any additional cargo on the motorcycle

CARRYING CARGO

Use the following guidelines when attaching cargo or accessories to the motorcycle. Where applicable, these guidelines also refer to the contents of any accessories.

- Keep cargo and accessory weight to a minimum, and keep items as close to the motorcycle as possible to minimize a change in the motorcycle's center of gravity. Changing the center of gravity can cause loss of stability and handling and could cause loss of control.
- Distribute weight evenly on both sides of the motorcycle. Maintain even weight distribution by checking accessories and cargo to make sure they're securely attached to the motorcycle before riding and whenever you take a break from riding. Uneven weight distribution, or accessories or cargo that shift suddenly while you're riding can make the motorcycle hard to handle, can cause loss of control, or cargo could fall from the motorcycle creating a hazard for surrounding vehicles.
- Do not attach large or heavy cargo such as sleeping bags, duffel bags or tents to the handlebars, front fork area or front fender. Cargo or accessories placed in these areas can cause instability (due to improper weight distribution or aerodynamic changes) and could cause loss of control. Such items can also block air flow to the transmission and cause overheating that can damage the transmission.
- Do not exceed the maximum cargo weight limit of any accessory (see accessory instructions and labels). Do not attach cargo to an accessory not designed for that purpose. Either circumstance could result in an accessory failure that could cause loss of control.
- Do not attach anything to the motorcycle unless specifically designed for that purpose by VICTORY.

SADDLEBAGS

When operating a motorcycle equipped with saddlebags:

- Never ride at speeds exceeding 80 MPH (120 km/h). Depending on load and weather conditions, the maximum safe operating speed may be less. Saddlebags, combined with the lifting or buffeting effects of wind, can cause instability.
- Distribute weight evenly in each of the saddlebags.
- Do not exceed the maximum cargo capacity of the saddlebags.
- Do not exceed the gross vehicle weight rating (GVWR).

PARKING THE MOTORCYCLE

When leaving the motorcycle unattended, disable the drive system. Remove the key to prevent unauthorized use by minors or those without proper motorcycle certification and training.

Park the motorcycle where people are not likely to touch the hot motor or place combustible materials near these hot areas. Do not park near a flammable source such as a kerosene heater or an open flame, where hot components could ignite combustible materials.

Park the motorcycle on a firm, level surface. Sloped or soft surfaces may not support the motorcycle. If you must park on a slope or soft surface, follow the precautions outlined on page 64.

MODIFICATIONS

Modifying the motorcycle by removing any equipment or by adding equipment not approved by VICTORY may void your warranty. Such modifications could make the motorcycle unsafe to ride and could result in severe injury to operator or passenger, as well as damage to the motorcycle. Some modifications may not be legal in your area of operation. If in doubt, contact your authorized VICTORY dealer.

TRANSPORTING THE MOTORCYCLE

When transporting the motorcycle:

- Use a truck or trailer with a flatbed area. Never tow the motorcycle. Towing will impair steering and handling.
- Restrain the motorcycle in an upright position.
- Place the transmission in neutral.
- Do not place restraints on the handlebars. Loosen the front turn signal mounts and slide them upward. Place tiedown straps around the fork tubes above the lower triple clamp. Secure the rear of the motorcycle with tiedowns around both sides of the swingarm, being careful to avoid the brake line and drive chain. Reposition the turn signals before operating the motorcycle.

USE OF ACCESSORIES

Because VICTORY cannot test and make specific recommendations concerning every accessory or combination of accessories sold, the operator is responsible for determining that the motorcycle can be safely operated with any accessories or additional weight. Use the following guidelines when choosing and installing accessories:

- Do not install accessories that impair the stability, handling or operation of the motorcycle, or operator visibility. Before installing an accessory, be sure that it does not:
  - Reduce ground clearance when the motorcycle is either leaned or in a vertical position.
  - Limit suspension or steering travel or your ability to operate controls.
  - Displace you from your normal riding position.
  - Obscure lights or reflectors.
- Do not use bulky or large accessories as they can cause instability (due to the lifting or buffeting effects of wind) and loss of control.
- Do not install electrical accessories that exceed the capacity of the motorcycle's electrical system. Never install higher wattage light bulbs than those supplied as original equipment. An electrical failure could result and cause hazardous loss of transmission power or lights, or damage to the electrical system.
- Use only genuine VICTORY accessories designed for your model.

SAFETY MAINTENANCE

Failure to perform safety maintenance as recommended can result in difficult handling and loss of control, which could result in serious injury or death. Always perform the safety maintenance procedures as recommended in this manual. Perform maintenance and repairs promptly as outlined in the VICTORY Service Manual, or see your authorized VICTORY dealer for service.

- Perform the pre-ride inspections before each ride.
- Perform maintenance at the intervals specified in the periodic maintenance table. See page 80.
- Maintain proper tire pressure, tread condition, and wheel and tire balance. Inspect tires regularly and replace worn or damaged tires promptly. Use only approved replacement tires. See the VICTORY Service Manual or your authorized VICTORY dealer.
- Ensure proper steering head bearing adjustment.
- Inspect the rear shock absorber and the front forks regularly for fluid leaks or damage. Make any necessary repairs promptly.
- Clean the motorcycle thoroughly to reveal items in need of repair. See page 115.
- Use only genuine VICTORY replacement parts, and ensure that all fasteners are tightened to the proper torque. Fasteners must meet original specifications for quality, finish, and type to ensure safety.

REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect that could result in a crash or cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Polaris Industries in writing. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Polaris Industries. To contact NHTSA, or obtain other information about motor vehicle safety, you may call the Vehicle Safety Hotline toll free at 1-888-327-4236 (TTY: 1-800-424-9153), visit the NHTSA web site at www.safercar.gov, or write to:

ADMINISTRATOR, NHTSA
1200 New Jersey Avenue, SE, West Building
Washington, DC 20590

SAFETY AND INFORMATION LABELS

Safety labels on your motorcycle either warn you of potential hazards that could cause serious injury or provide important safety information. Read these labels carefully and don't remove them.

NOTE: If a label comes off or becomes hard to read, contact your authorized VICTORY dealer for a replacement.

OPERATOR WARNING LABEL (7183275)

The Warning Label is located on the Upper Body Insert.

WARNING

- Read Owner's Manual and, during use, follow all safety precautions.
- Always wear an approved helmet, eye protection and protective clothing.
- If your Owner's Manual is missing, contact a Victory / Polaris dealer for a replacement.

EMISSIONS COMPLIANCE LABEL (7183241)

When applicable, the Emissions Compliance Label is attached to the left side of the frame by the suspension forks.

VEHICLE EMISSION CONTROL INFORMATION

MANUFACTURED BY: POLARIS INDUSTRIES INC.

ENGINE FAMILY: GVMCCLIONBEM

EMISSION CONTROL SYSTEM: BATTERY-ONLY

THIS VEHICLE CONFORMS TO U.S. EPA AIR EMISSIONS REGULATIONS APPLICABLE TO 2016 MODEL YEAR NEW HIGHWAY MOTORCYCLES

MANUFACTURING INFORMATION LABEL (41219950)

The Manufacturing Information Label is attached to the left side of the frame by the suspension forks. The Manufacturing Information Label displays the VIN, date of manufacture, recommended “Cold” tire pressures, and gross vehicle weight rating (GVWR).

MANUFACTURING INFORMATION LABEL

MFD BY: POALRIS INDUSTRIES INC.

DATE: MM/YY

GVWR: 356 kg (782 lb)

GAWR FRONT: 143 kg (314 lb) WITH 120/70ZR17 58W M/C TIRE, 17”x3.5” RIM, AT 290 kPA (42 psi) COLD

GAWR REAR: 213 kg (468 lb) WITH 160/60ZR17 69W M/C TIRE, 17”x4.5” RIM, AT 290 kPA (42 psi) COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: XXXXXXXXXXXXXXXXX

TYPE: MOTORCYCLE

HIGH VOLTAGE WARNING LABEL (12546981)

The High Voltage Warning Label is located under the lower body frame on the motor controller.

HIGH VOLTAGE!

DISCONNECT CABLES BEFORE SERVICE. REFER TO MANUAL BEFORE SERVICE.

MOTOR WARNING LABEL (52668028)

The Motor Warning Label is located on the motor.

DANGER

DO NOT TOUCH LOVE TERMINALS OR OPERATE WHEN EXPOSED.

ATTENTION

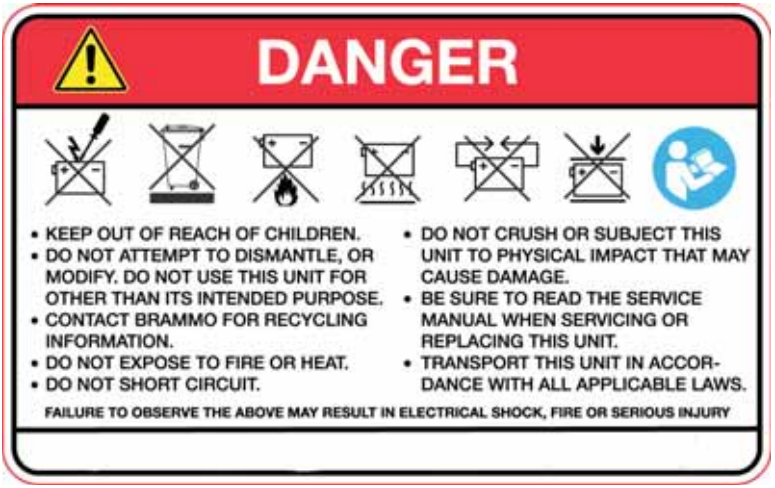
DO NOT HANDLE OR ADJUST ENCODER. SERVICE BY TRAINED PERSONNEL ONLY.

BATTERY SAFETY LABEL (68450119)

The Battery Safety Label is located on the top of each battery module.

DANGER

- KEEP OUT OF REACH OF CHILDREN.
- DO NOT ATTEMPT TO DISMANTLE, OR MODIFY. DI NOT USE THIS UNIT FOR OTHER THAN ITS INTENDED USE.
- CONTACT VICTORY FOR RECYCLING INFORMATION.
- DO NOT EXPOSE TO FIRE OR HEAT.
- DO NOT SHORT CIRCUIT.
- DO NOT CRUSH OR SUBJECT THIS UNIT TO PHYSICAL DAMAGE.
- BE SURE TO READ THE SERVICE MANUAL WHEN SERVICING OR REPLACING THIS UNIT.
- TRANSPORT THIS UNIT IN ACCORDANCE WITH ALL APPLICABLE LAWS.



FUSE WARNING LABEL (46425360)

The Fuse Warning Label is located under the upper body panel.

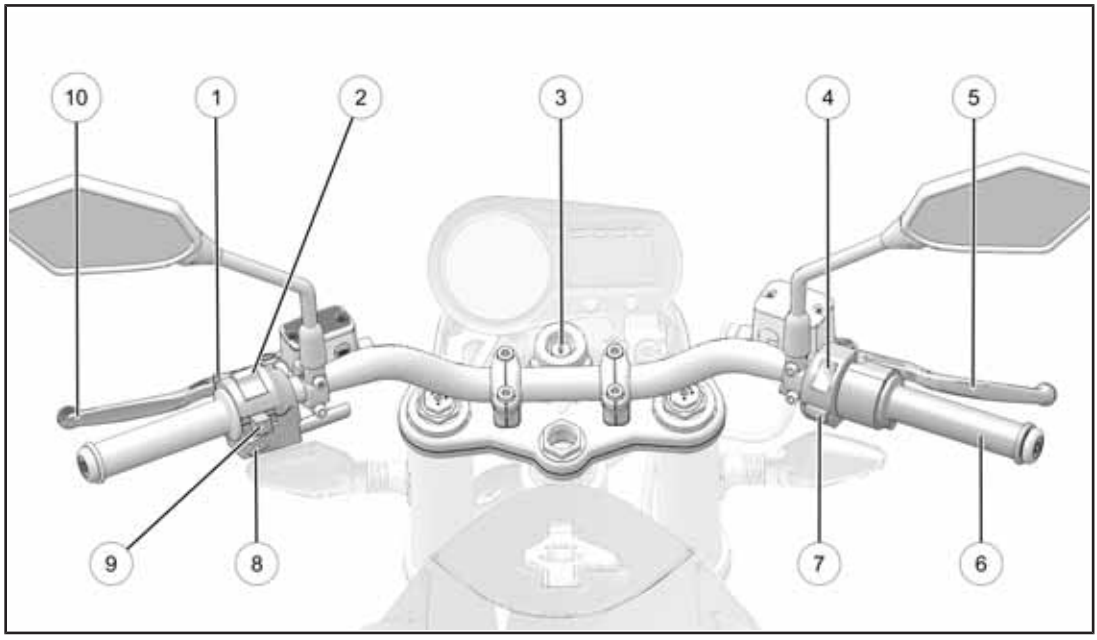
HIGH VOLTAGE!

REFER TO MANUAL BEFORE SERVICE.

IMPROPER USE MAY CAUSE SERIOUS INJURY.

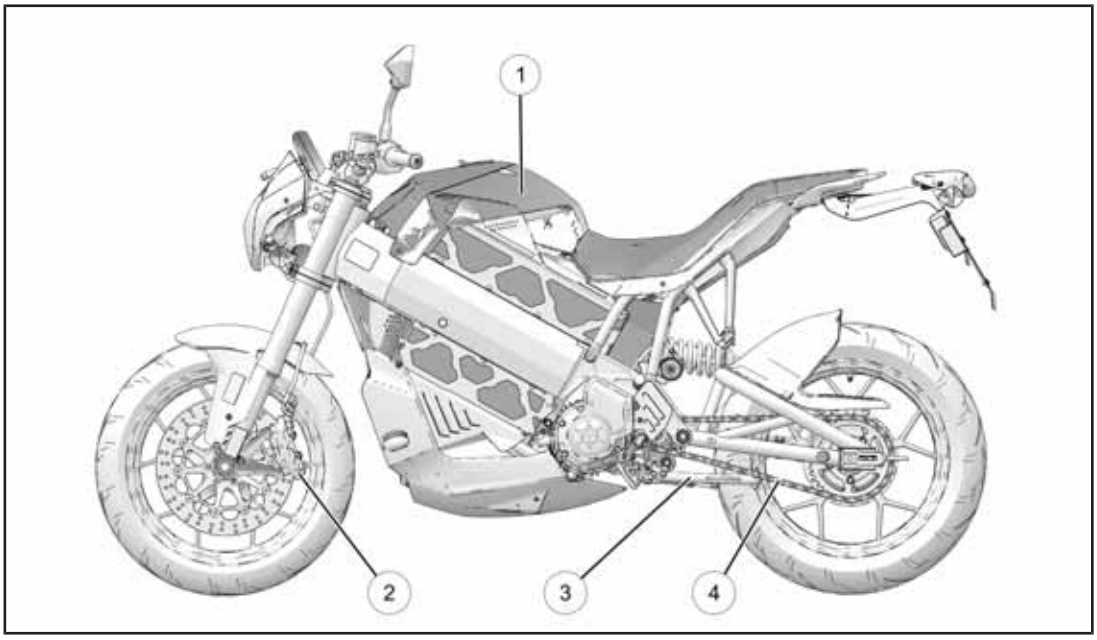
COMPONENT IDENTIFICATION

HANDLEBARS



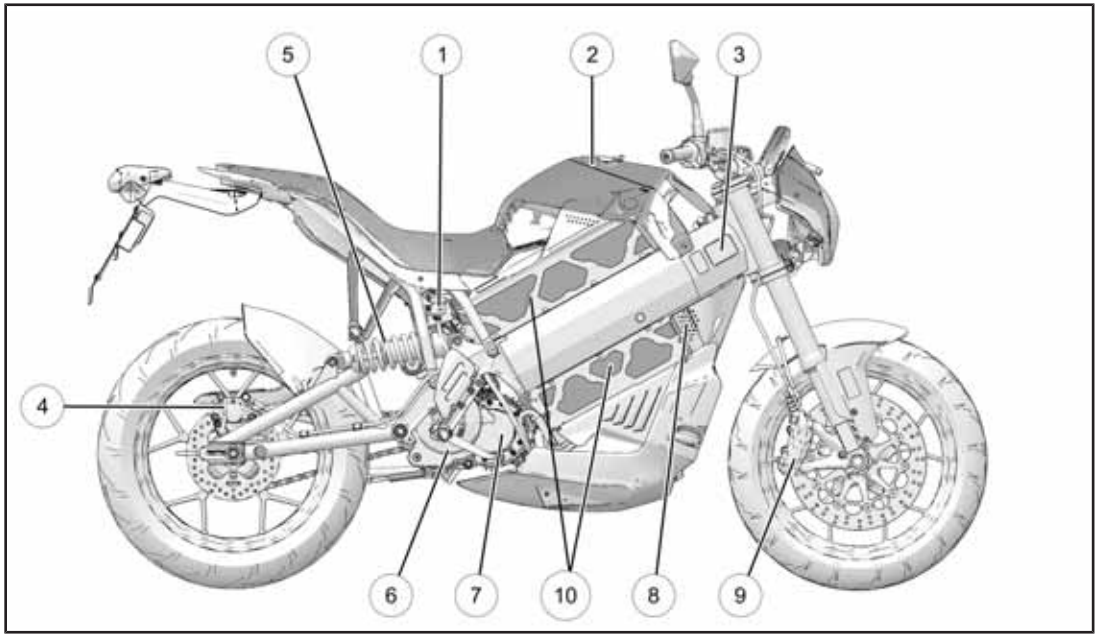
① Headlight high beam flash
② Headlight high/low beam
③ Key switch
④ RUN/STOP switch
⑤ Front brake
⑥ Throttle
⑦ Start button
⑧ Horn
⑨ Turn signal switch
⑩ Clutch

LEFT-SIDE VIEW



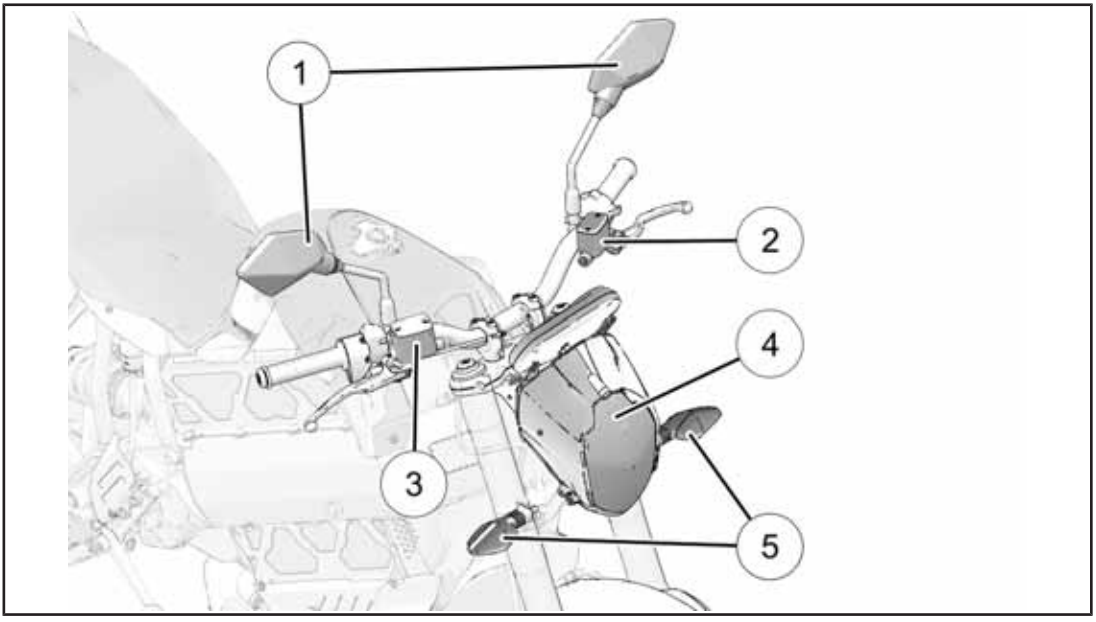
① Upper body panel
② Front brake caliper
③ Sidestand
④ Drive chain

RIGHT-SIDE VIEW



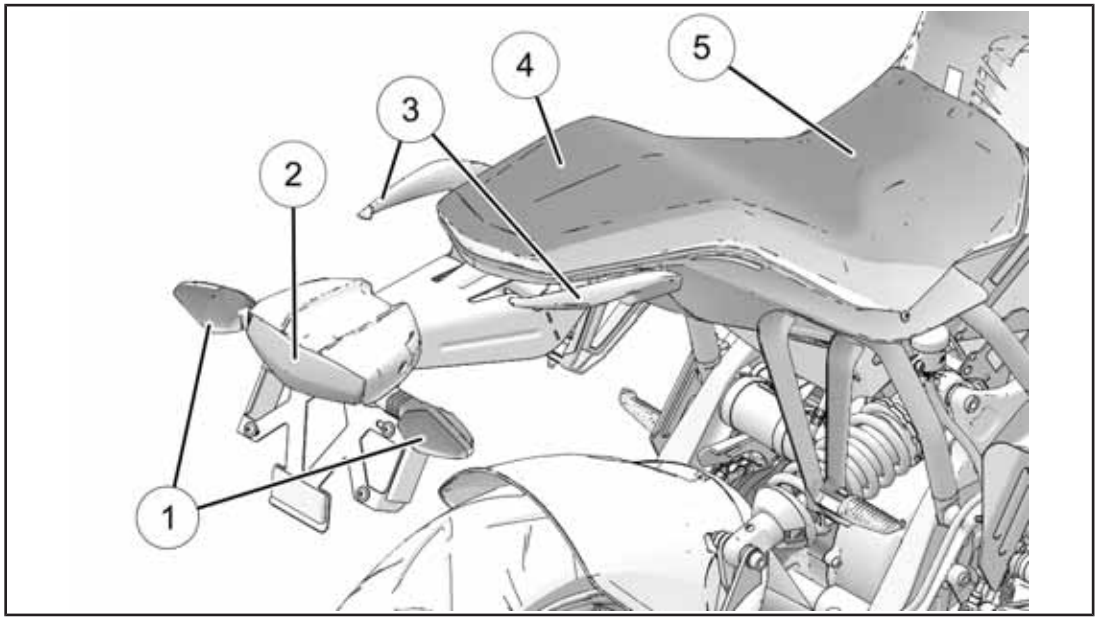
① Rear brake fluid reservoir
② Fuse box (under upper body panel)
③ High voltage connector (behind upper body insert)
④ Rear brake caliper
⑤ Rear suspension spring
⑥ Transmission oil - drain plug
⑦ Transmission oil - fill plug
⑧ Coolant filler cap (behind front cover)
⑨ Front brake caliper
⑩ Battery modules

FRONT VIEW



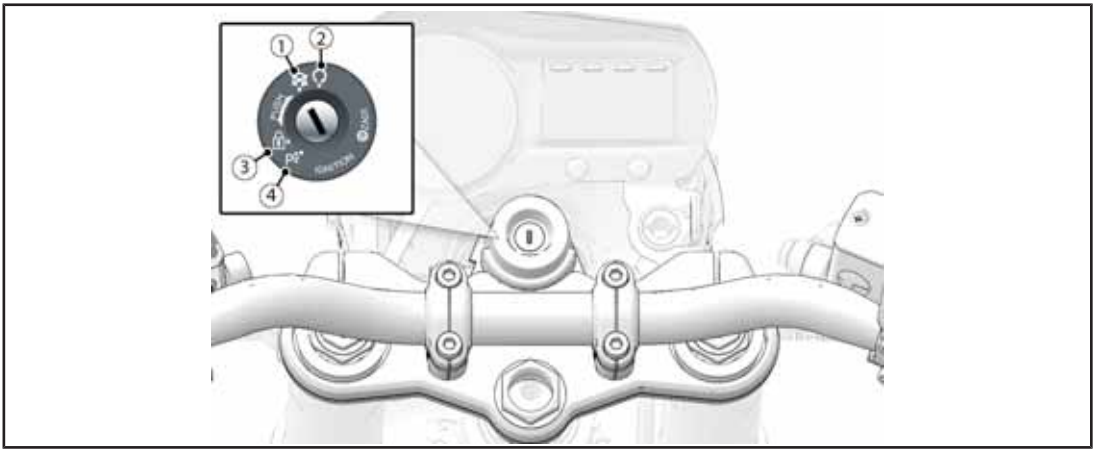
① Mirrors
② Clutch fluid reservoir
③ Front brake fluid reservoir
④ Headlight
⑤ Front turn signals

REAR VIEW



① Rear turn signals
② Brake light / tail light
③ Passenger hand grips
④ Passenger seat
⑤ Operator seat

KEY SWITCH



The key switch provides electrical power to the motorcycle, the lighting system and all electrical switches and buttons. The key operates the key switch.

The key switch is used to select the operational mode of the motorcycle, either ON or PARK mode, and to lock the steering for theft prevention.

① **OFF**

All electrical circuits are inactive and the key can be removed.

② **ON**

All electrical circuits are energized and the key cannot be removed. The headlamp, taillight, and instrument lights illuminate.

③ **LOCK**

Turn the handlebar all the way to the left or right, push down on the key, and turn counter-clockwise to the LOCK (steering lock) position to lock the steering head. No electrical circuits function.

④ **PARK (P)**

From the LOCK position, push the key inward and turn it counter-clockwise to the PARK position. The parking lights and the instrument cluster operate. Drive mode cannot be engaged.

The taillight, indicator lights, and license plate light illuminate.

KEYS

Your motorcycle was supplied with two keys. VICTORY recommends that you keep one key in a safe location, as a spare, in case you misplace the other. If one or both keys are lost, contact your authorized VICTORY dealer for replacement options.

INSTRUMENTS, FEATURES, AND CONTROLS

INSTRUMENT CLUSTER

① Tachometer and indicator lamps
② Motor Efficiency Indicator lights
③ Liquid Crystal Display (LCD)
④ Mode button
⑤ Odometer / trip button

TACHOMETER

The tachometer needle will swing to maximum RPM and then zero when the motorcycle powers up.

NOTE: If the tachometer needle does not return to zero, contact your authorized VICTORY dealer as soon as possible.

INDICATOR LAMPS

LAMP	INDICATES	CONDITION
	ON (Amber)	Flashes when the key switch is on and the motorcycle has been activated. Stays illuminated when the motorcycle is in motion.
	Headlight Low Beam (Green)	Illuminates when the headlight is operating on low beam.
	Headlight High Beam (Blue)	Illuminates when the headlight is operating on high beam.
	Left Turn Signal (Green)	Flashes when the left turn signal is operating.
	Right Turn Signal (Green)	Flashes when the right turn signal is operating.
	System Attention (Red)	Flashes when the motorcycle has detected a fault or warning. Will also be accompanied by a fault or warning message on the LCD.
	Sidestand Down (Red)	Illuminates when the sidestand is in the down position.
	Motor Over Temperature (Red)	Illuminates when the temperature of the motor reaches its thermal operating limit. Illumination of the indicator will be accompanied by a THERMAL CUTBACK message on the LCD, see page 36.

LAMP	INDICATES	CONDITION
	Battery Low / Discharged (Amber / Red)	Illuminates red when the battery State of Charge (SoC) drops to the following: At 20% State of Charge or lower: • The square battery icon will flash red. • The LCD message bar will read "BATTERIES LOW". At 15% SoC or lower: • The square battery icon will flash red. • The LCD message bar will flash "RECHARGE REQ'D". At 10% SoC: • The square battery icon will flash red. • The LCD message bar will flash "RECHARGE REQ'D". • The Motor Efficiency Indicators will **NOT** flash.
	Charge Status (Amber / Green)	Illuminates amber when the motorcycle is in charge mode and A/C power is connected. Illuminates green when the motorcycle batteries are at, or above, 99% SoC.

MOTOR EFFICIENCY INDICATORS

The Motor Efficiency Indicator LED lights will illuminate when the motorcycle is operating efficiently. The more efficient the motorcycle operates, the more lights will illuminate. Zero LED lights illuminated indicates the motor is operating at lowest efficiency, up to all four LED lights illuminated indicates maximum efficiency.

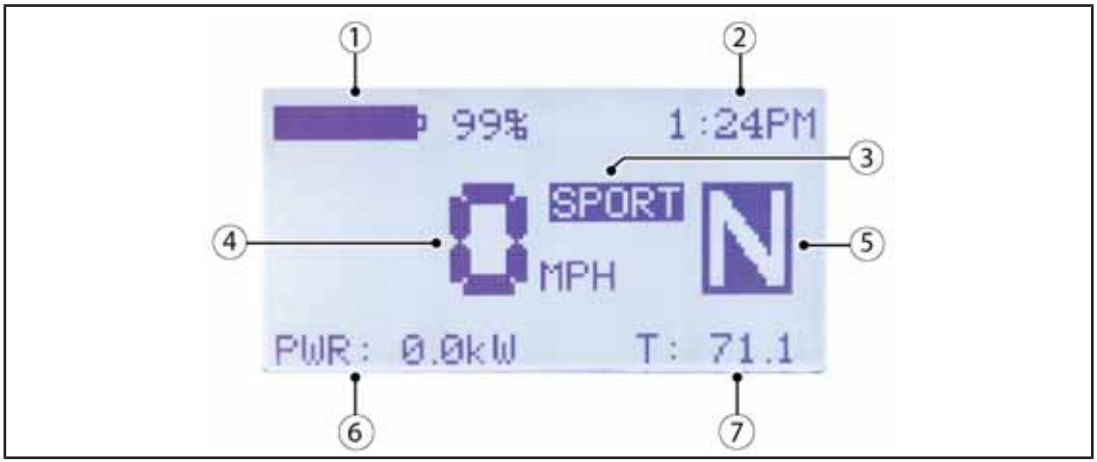
LIQUID CRYSTAL DISPLAY (LCD)

When the motorcycle powers up, the LCD will temporarily show all black so you can make sure it is functioning properly. The LCD backlight is always illuminated when the motorcycle is powered up.

NOTE: If any part of the display does not come on, or the backlight is not illuminated, contact your authorized VICTORY dealer as soon as possible.

NOTE: When the drive system is disengaged, if the key is left in the ON position, and the SOC is less than 20% for 10 minutes or longer, the display backlight will turn off to conserve energy. In this instance you must cycle key to OFF position before bike will power up again.

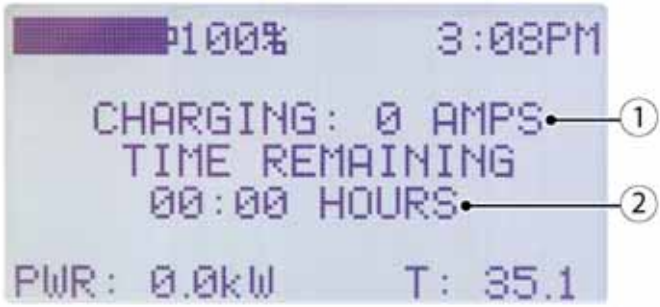
DRIVE MODE



① Battery State of Charge (SoC)
② Current time
③ SPORT operating mode selected
④ Speed (MPH or km/h)
⑤ Gear selected
⑥ Information - press the mode button to cycle through the following functions:
- Power consumption in kilowatts
- Air temperature
- Motor temperature
- Estimated range remaining

⑦ Odometer / trip display

CHARGE MODE



① Charging rate for the connected supply

② Estimated time remaining to fully charge the batteries

SPEEDOMETER

The speedometer displays vehicle speed on the LCD in either miles per hour (MPH) or kilometers per hour (km/h).

NOTE: To program the LCD to display speed in kilometers per hour, see your authorized VICTORY dealer.

ODOMETER/TRIP BUTTON

Press to cycle between the odometer and trip displays. Press and hold to reset the trip counter.

MODE BUTTON

Press to cycle between:

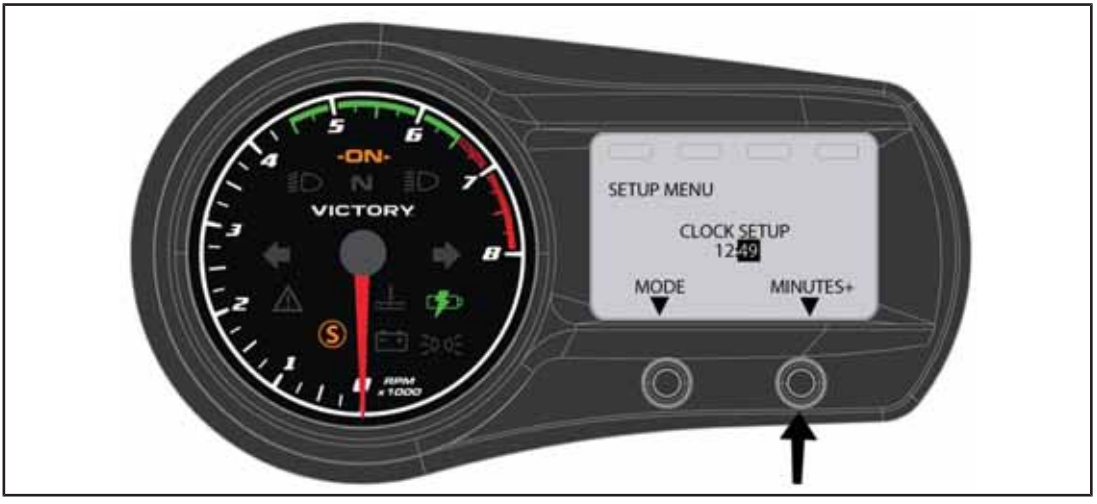
- Power consumption in kilowatts
- Air temperature
- Motor temperature
- Estimated range remaining

CLOCK

The time and date on your motorcycle were set at the factory to Pacific Standard Time. To adjust the time on your motorcycle:

1. Connect the charger to the motorcycle and a wall outlet. This will put the motorcycle in Charge mode.

2. Press and hold the Mode and Trip buttons simultaneously for approximately two seconds to enter Setup mode.
3. Press the Mode button to select either HOURS or MINUTES.



4. Press the Trip button to increase the selected setting.

5. Once you have finished adjusting the time, press the Mode button to select EXIT and then press the Trip button to confirm.

NOTE: If no button is pressed for more than 30 seconds, the motorcycle will revert back to Charge mode.

6. Disconnect the charger from the motorcycle.

MOTORCYCLE USB

The motorcycle records key motorcycle parameters at 1Hz (1 sample/second) for analysis and service support.

The data is recorded onto a USB drive located beneath the seat. When your motorcycle is serviced, VICTORY technicians and authorized dealers access this information to make sure the motorcycle is performing as intended and to promptly diagnose and resolve any issues that may exist.

SYSTEM WARNING AND ERROR CODES

Your motorcycle has the ability to detect warning and error conditions. These warnings and errors are designed to alert you that a condition exists that is out of specification.

If a fault is detected, the system attention indicator light will illuminate on the tachometer and a message will be displayed on the LCD panel.

Most of these warnings and errors will require an authorized VICTORY dealer to perform system diagnostics. However, some issues can be resolved by the operator by either correcting the issue or by changing riding style.

CODE	MESSAGE		DESCRIPTION
A6	SYSTEM FAULT A6		AIM Module Not Communicating
B6	SERVICE REQ'D B6	SYSTEM FAULT B6	BMS Not Communicating
B7	SERVICE REQ'D B7	SYSTEM FAULT B7	Battery Fault: Module Lost
B8	SERVICE REQ'D B8	SYSTEM FAULT B8	Battery Fault: Temperature Sensor Failure
B28	SERVICE REQ'D B28	SYSTEM FAULT B28	Battery Fault: Voltage Sensor Failure
B29	SERVICE REQ'D B29	SYSTEM FAULT B29	Battery Fault: Current Sensor Failure
B30	RECHARGE REQUIRED B30		Battery Fault: Critically discharged alarm
B31	SERVICE REQ'D B31	SYSTEM FAULT B31	Battery Fault: Over Volt Alarm
B32	SERVICE REQ'D B32	SYSTEM FAULT B32	Battery Fault: Sanity Error (No Communication)
B33	RECHARGE REQUIRED B33		Charge (SoC) is at 0%
B35	ALLOW COOLDOWN B35		Battery Fault: Over Temperature Shutdown
B36	ALLOW COOLDOWN B36		Battery Fault: Over Temperature Alarm
B40	SERVICE REQ'D B40	SYSTEM FAULT B40	BMS Back in Idle Mode
B41	SERVICE REQ'D B41	SYSTEM FAULT B41	Battery Fault: Isolation Measurement Failed

CODE	MESSAGE		DESCRIPTION
B53	RECHARGE REQUIRED B53		Battery Fault: Critically Discharged Warning
B54	SERVICE REQ'D B54	SYSTEM FAULT B54	Battery Fault: Over Volt Warning
B55	SERVICE REQ'D B55	SYSTEM FAULT B55	Battery Fault: SoC Mismatch > 30%
B56	ALLOW COOLDOWN B56		Battery Fault: Over Temperature Warning
B67	SYSTEM FAULT B67		Battery Fault: Battery Tried to Activate Fuse protection
C2	SERVICE REQ'D C2	SYSTEM FAULT C2	Charger Fault
C3	SYSTEM FAULT C3		Battery Fault: Safety Interlock is Open
C4	SYSTEM FAULT C4		Charger Fan Current Too High
C65	COOLDOWN CYCLE C65		Charger Temperature Too High
D4	SERVICE REQ'D D4	SYSTEM FAULT D4	Motor Controller Not Communicating
D5	THERMAL CUTBACK D5		Motor Temperature Too High
D6	THERMAL CUTBACK D6		Motor Controller – Temperature Too High
D9	SERVICE REQ'D D9		Motor Controller – Internal Memory Error
D15	SERVICE REQ'D D15		Motor Controller – Motor Controller Internal 12V Supply Too Low
D17	SERVICE REQ'D D17		Motor Controller – Battery Voltage Too Low
D20	SERVICE REQ'D D20		Motor Controller – Motor Over-Current
D21	SERVICE REQ'D D21		Motor Controller – Contactor Coil Error
D22	SERVICE REQ'D D22		Motor Controller – Battery Voltage Too High

CODE	MESSAGE		DESCRIPTION
D24	SERVICE REQ'D D24		Motor Controller – Controller Error or Contactor Coil Error
D25	SERVICE REQ'D D25		Motor Controller – Contactor Error
D26	SERVICE REQ'D D26		Motor Controller – Controller Error
D29	SERVICE REQ'D D29		Motor Controller – CAN Error
D30	SERVICE REQ'D D30		Motor Controller – Over Speed or Encoder Error
D31	SERVICE REQ'D D31		Motor Controller – One or More Motor Sensor Wires Not Connected
H34	SERVICE REQ'D H34		Discharge Precharge Error
H52	SERVICE REQ'D H52		Gear Select or Side Stand Sensor Failure
H73	GET SERVICE H73		USB Flash Drive Bad or Removed
I51	SERVICE REQ'D I51		Dash Power Current Too High
S53	SERVICE REQ'D S53		Motor Controller – Low Battery
S54	SERVICE REQ'D S54		Motor Controller – High Battery
S55	SERVICE REQ'D S55		Motor Controller – Vbat Below Rated Min
S56	SERVICE REQ'D S56		Motor Controller – Motor Low Voltage
S57	SERVICE REQ'D S57		Motor Controller – Motor High Voltage
S58	THERMAL CUTBACK S58		Motor Controller – Controller Too Hot
S59	THERMAL CUTBACK S59		Motor Controller – Motor in Thermal Cutback
S60	SERVICE REQ'D S60		Motor Controller – Motor Too Cold

CODE	MESSAGE		DESCRIPTION
S61	SERVICE REQ'D S61		Motor Controller – Controller in Preoperational Mode
S65	SERVICE REQ'D S65		Motor Controller – Sequence Fault (Usually, Throttle Was Not Closed When Controller Powered On)
S69	SERVICE REQ'D S69	SYSTEM FAULT S69	Motor Controller – Entering Cutback
S70	SERVICE REQ'D S70	SYSTEM FAULT S70	Motor Controller – RPDO Timeout (CAN Bus Timing Error)
S71	SERVICE REQ'D S71	SYSTEM FAULT S71	Motor Controller – Supply Critical
S72	SERVICE REQ'D S72	SYSTEM FAULT S72	Motor Controller – RPDO Timeout (Severe CAN Bus Timing Error)
S73	SERVICE REQ'D S73	SYSTEM FAULT S73	Motor Controller – Internal Fault
S77	SERVICE REQ'D S77	SYSTEM FAULT S77	Motor Controller – Autozero Range
S81	SERVICE REQ'D S81	SYSTEM FAULT S81	Motor Controller – Line Contactor Overcurrent
S82	SERVICE REQ'D S82	SYSTEM FAULT S82	Motor Controller – Line Contactor Welded
S83	SERVICE REQ'D S83	SYSTEM FAULT S83	Motor Controller – Alg In Wire Off (Usually, Throttle Output Voltage Problem)
S85	SERVICE REQ'D S85	SYSTEM FAULT S85	Motor Controller – Encoder Fault
S86	SERVICE REQ'D S86	SYSTEM FAULT S86	Motor Controller – Motor Over Current
S87	SERVICE REQ'D S87	SYSTEM FAULT S87	Motor Controller – Current Control Fault
S88	SERVICE REQ'D S88	SYSTEM FAULT S88	Motor Controller – Motor Over Speed

CODE	MESSAGE		DESCRIPTION
S94	SERVICE REQ'D S94	SYSTEM FAULT S94	Motor Controller – Mtr Slv in Wrong State
S96	SERVICE REQ'D S96	SYSTEM FAULT S96	Motor Controller – DSP Over Voltage
S97	SERVICE REQ'D S97	SYSTEM FAULT S97	Motor Controller – Mosfet s/c M1 Top
S98	SERVICE REQ'D S98	SYSTEM FAULT S98	Motor Controller – Mosfet s/c M1 Bottom
S99	SERVICE REQ'D S99	SYSTEM FAULT S99	Motor Controller – Mosfet s/c M3 Bottom
V1	SERVICE REQ'D V1	SYSTEM FAULT V1	VCU Temperature Too High
V3	SERVICE REQ'D V3	SYSTEM FAULT V3	BMS CAN processor failure
V4	SERVICE REQ'D V4	SYSTEM FAULT V4	Motor Controller CAN processor failure
V58	SERVICE REQ'D V58	SYSTEM FAULT V58	VCU +12V Out of Spec
V59	SERVICE REQ'D V59	SYSTEM FAULT V59	VCU +5V Out of Spec
V69	SERVICE REQ'D V69	SYSTEM FAULT V69	SPI Flash Memory Failure
V70	GET SERVICE V70		USB Interface Failure
V71	GET SERVICE V71		USB Flash Power Fail
V72	GET SERVICE V72		VCU Temperature Vref Out of Spec
V77	GET SERVICE V77		Sound Failure
V78	GET SERVICE V78		Real Time Clock Not Working
-	DISCONNECT POWER		AC Connected In Drive Mode
-	SIDESTAND DOWN		Sidestand is Down in Drive Mode
-	CONNECT POWER		AC Not Connected In Charge Mode
-	DASH OFF - NO MESSAGE		Dash Not Connected

CODE	MESSAGE		DESCRIPTION
-	DASH OFF - NO MESSAGE		Dash CAN Processor Failure
-	BATTERIES LOW		Battery Fault: BMS SoC < 20%
-	HEADLIGHT OFF		Headlights Off in Drive Mode
-	ACCELERATOR STUCK?		Accelerator Deflected – Should Be at 0 Position
-	COME TO FULL STOP		Vehicle Speed Not Zero When Throttle Switch was Turned On
-	CYCLE THROTTLE SW		Throttle Switch On at Power Up
-	SERVICE MODE		Diagnostic Cable Connected
-	CYCLE THROTTLE SW		Motor Controller Switch Sequence Error
-	ACCELERATOR STUCK?		Motor Controller Accelerator Deflected at Power Up
-	TWIST THROTTLE T0 0		Motor Controller – Throttle Fault
-	BATTERY TOO HOT		Battery Fault: Over Temperature Shutdown With Different Temperature Limit for Drive or Charge
-	BATTERY TOO COLD		Battery Fault: Battery is Too Cold to Charge
-	BATTERY TOO COLD		Battery Fault: Battery is Too Cold to Drive
-	BATTERY TOO HOT		Battery Fault: Over Temperature Shutdown With Different Temperature Limit for Drive or Charge

LEFT HANDLEBAR CONTROLS

① Headlight high / low beam
② Headlight high beam flash
③ Turn signal switch
④ Horn

HEADLIGHT HIGH/LOW BEAM

The headlight dimmer switch is used to change between the high and low beams of the headlight. To operate, move the switch forward for high beam, or back for low beam.

NOTE: A blue LED on the instrument cluster illuminates whenever the headlight high beam is on.

HEADLIGHT HIGH BEAM FLASH

The high beam flash is used to alert other motorists. To operate, pull the momentary switch.

TURN SIGNAL SWITCH

The turn signal switch is used to signal a turn or a lane change. To operate, move the switch all the way in the proper direction and release it. The appropriate turn signal lights will start blinking and an indicator will flash on the instrument cluster. To cancel the signal, push the switch in.

HORN

The horn is used to alert others motorists. To operate, push the horn button.

RIGHT HANDLEBAR CONTROLS

① RUN/STOP switch

② Start button/operating mode

RUN/STOP SWITCH

The RUN/STOP switch is used to turn the motor controller on and off. Before powering up the motorcycle, ensure that the switch is in the STOP position.

START BUTTON/OPERATING MODE

With the key switch is in the ON position and the RUN/STOP switch in the RUN position, press and hold the Start button for approximately two seconds to put the motorcycle in Drive mode. You will hear a click from the main contactor as the drive system is energized and the ON indicator flashes.

OPERATING MODE

With the motorcycle stationary and in Drive mode, press and hold the Start button for two seconds to change the operating mode between ECONOMY and SPORT mode.

When the motorcycle is in SPORT mode, the LCD will display the SPORT indicator. When the motorcycle is in ECONOMY mode, the LCD will display the "ECO" indicator.

VICTORY recommends that you spend some time riding in both ECONOMY and SPORT modes to become fully familiar with how the motorcycle handles in each mode. This will help you best determine which mode is suitable for your riding conditions.

As a guideline:

- ECONOMY mode provides a smoother transition into regenerative braking, ideal for city riding.
- SPORT mode provides more regenerative braking with a different transition point from off throttle to regenerative braking.

MIRROR ADJUSTMENT

To adjust the mirrors, sit on the motorcycle in the anticipated riding position. Adjust the mirrors so that you can see a small portion of your shoulders in each mirror.

PRE-RIDE INSPECTIONS

PRE-RIDE INSPECTION

To keep your motorcycle in safe operating condition, always perform the recommended pre-ride inspections before each ride. This is especially important before making a long trip and when removing the motorcycle from storage.

⚠ WARNING

Failure to perform the recommended pre-ride inspections could result in component failure while riding, which could result in serious injury or death. Always perform the pre-ride inspections before each ride.

You must be familiar with all instruments and controls to perform the pre-ride inspections.

TIP: During the pre-ride inspections you may use products that are potentially hazardous, such as oil or brake fluid. When using any of these products, always follow the instructions and warnings on the product packaging.

When inspections reveal the need for adjustment, replacement, or repair:

- refer to the Maintenance section of this manual, see page 79
- refer to the VICTORY Service Manual
- or see your authorized VICTORY dealer

ITEM	INSPECTION PROCEDURE
Electrical	
Headlamp	Verify that the headlamp illuminates. Switch to high beam. Verify that the high beam indicator comes on and that lamp brightness increases.
Taillight/Brake Light	Verify that the taillight and license plate light illuminate. Verify that taillight brightness increases when the front brake lever is applied and also when the rear brake pedal is applied.
Turn Signals	Move the turn signal switch to the left. Verify that front and rear left turn signals flash, as well as the corresponding light on the indicator panel. Push the switch inward to cancel the signal. Verify that the signals and the indicator light stop flashing. Repeat the procedure for the right turn signals.
Horn	Press the horn button. Verify that the horn sounds loudly.
Neutral Indicator	Place the transmission in neutral. Verify that the neutral indicator comes on.
RUN/STOP Switch	With the key switch turned ON, and the RUN/STOP switch in the RUN position, hold the Start button to initialize the motorcycle. Switch the RUN/STOP switch to the STOP position and verify that the motorcycle deactivates.
General	
Transmission Oil Level	Check the oil level in the fill hole.
Tires	Inspect condition, pressure, and tread depth.
Wheels	Inspect both wheels for cracks or damage.
Brake Operation	Inspect pedal and lever movement.
Brake Fluid Levels	Check front and rear brake fluid levels.
Brake Components	Inspect hoses, connections, and brake pads.
Throttle	Verify that the throttle twist grip returns to a resting position when released from full throttle.
Clutch (Mechanical)	Check lever operation.
Front Suspension	Check for leaks, debris and damage.
Steering	Check for smooth operation.
Rear Suspension	Check shock movement and air pressure, verify ground clearance.
Drive Chain	Check for wear, damage, and proper deflection.
Sidestand	Verify smooth operation, inspect pivot bolt and spring and pad.
Fasteners	Inspect for loose, damaged, or missing fasteners.
Coolant Level	Check coolant level.
Mirrors	Adjust for proper rear view.

TIRES

TIRE PRESSURE

1. Check tire pressure before riding, when the tires are cold. This will provide the most accurate reading, as riding warms the tires and increases tire air pressure.
2. Adjust tire pressure as needed based on the total weight of your intended load. Refer to the tire pressure table. See page 100.

TIRE CONDITION

Inspect the tire sidewalls, road contact surface, and tread base. If inspection reveals cuts, punctures, cracks, or other wear or damage, replace the tire before riding. Use only approved replacement tires. See the VICTORY Service Manual or your authorized VICTORY dealer.

TIRE TREAD DEPTH

Wear bars (if equipped) are easily visible tread depth indicators. See page 101. When the road contact surface has worn to the top of the wear bars, replace the tire.

CARGO RESTRAINTS

Inspect all cargo restraints when carrying cargo. Make sure all restraints are tightly secure to prevent cargo from shifting.

DRIVE CHAIN

Check the condition of the drive chain. Adjust the chain tension and lubricate as needed.

SIDESTAND

1. Straddle the motorcycle and bring it to the fully upright position.
2. Move the sidestand upward to the stored position and downward to the fully extended position several times. It should move smoothly and quietly. Make sure the return spring holds the sidestand tightly in place when the sidestand is in the stored position.
3. Replace a bent sidestand immediately. Do not try to straighten a bent sidestand. The sidestand will be weakened, and may not be able to support the motorcycle.
4. Inspect the sidestand pivot bolt for looseness or wear. Tighten or replace a loose or worn bolt.

FASTENERS

1. Inspect the entire motorcycle chassis and transmission for loose, damaged, or missing fasteners. Tighten loose fasteners to the proper torque. Refer to the Specifications section (see page 125) of this manual or to the VICTORY Service Manual for torque values.
2. Replace stripped, damaged, or broken fasteners before riding. Use genuine VICTORY fasteners of equal size and strength.

STEERING

On level ground, straddle the motorcycle and bring it to the fully upright position. Turn the handlebars from stop to stop. The action should be smooth but not loose. Make sure wires, hoses, and control cables do not interfere with smooth steering.

TRANSMISSION OIL LEVEL

The use of Synthetic 10W-30 API GL-1 Motorcycle Oil (wet clutch approved) is recommended. The fill plug is located on the clutch side of the gearbox.

⚠ WARNING

Operating the transmission with too much or too little oil can cause serious transmission damage or seizure, which could result in loss of control and serious injury or death. Do not operate the motorcycle with the oil level too low or too high.

TIP: The transmission must be at normal operating temperature when checking the oil level.

1. Place the transmission in neutral.
2. Start the motorcycle and drive it for 5–10 minutes to warm the oil to operating temperature.
3. Stop the motor and wait 3–5 minutes before checking the oil level.
4. Position the motorcycle on level ground in an upright position.

NOTE: Use of a rear wheel stand is recommended.

5. Remove the oil level plug on the clutch side of the gearbox.
6. View the oil level. Oil level should be even with the threads of the oil level hole.

7. Add oil as needed to bring the level into the correct operating range, or if overfull, let the oil drain until the level is correct. See page 86.

FRONT BRAKE LEVER

Pull the front brake lever toward the handlebar and release it. It should move freely and smoothly, and it should return to rest position quickly when released. You should feel a firm resistance in the lever within the first 3/4 inch (19 mm) of lever travel.

If the lever fails to perform as stated, service the brake lever before riding. See the VICTORY Service Manual or your authorized VICTORY dealer.

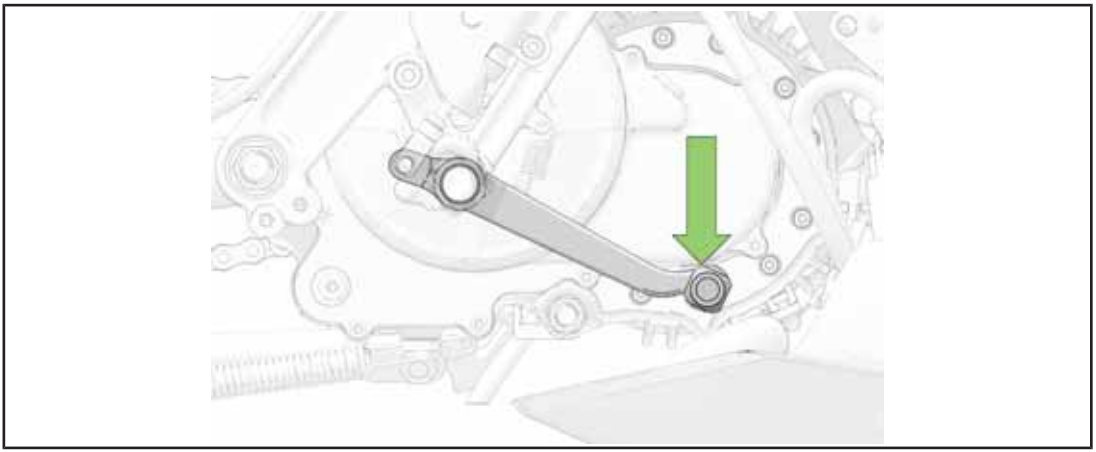
BRAKE LEVER REACH ADJUSTMENT

Lever reach (distance to the hand grip) is adjustable. Use a flat head screwdriver to move the adjuster screw.

FRONT BRAKE FLUID LEVEL

1. Straddle the motorcycle and bring it to the fully upright position. Position the handlebars so that the fluid reservoir is level.
2. View the fluid level through the sight glass. The fluid should be clear. Replace cloudy or contaminated fluid.
3. Add fluid as needed. The fluid level should be at, or above the top of the sight glass.

REAR BRAKE PEDAL



Press and release the rear brake pedal. It should move freely and smoothly, and it should return to rest position quickly when released. You should feel a firm resistance in the pedal within the first 3/8 inch (8 mm) of pedal travel.

If the brake pedal fails to perform as stated or travels too far before beginning to engage the brake, see the VICTORY Service Manual, or contact an authorized VICTORY dealer for service.

REAR BRAKE FLUID LEVEL

1. Straddle the motorcycle and bring it to the fully upright position.
2. View the brake fluid through the reservoir. The fluid should be clear. Replace cloudy or contaminated fluid.
3. Add fluid as needed. The fluid level should be between the minimum and maximum marks on the reservoir.

BRAKE LINES

Inspect all brake hoses and connections for dampness or stains from leaking or dried fluid. Tighten any leaking connections and replace components as necessary.

BRAKE PADS

Brake pad wear depends upon the severity of usage, the type of riding, and road conditions. Generally, the pads will wear faster on wet and dirty roads. Inspect the pads at each regular maintenance interval.

Always inspect both pads in each brake caliper, and always replace brake pads as a set.

Inspect front and rear brake pad thickness. Replace brake pads when wear lines are no longer visible, or when pad thickness reaches 1 mm.

THROTTLE

1. Rotate the throttle control grip. It should rotate smoothly from the rest position to the completely open position. It should return to the rest position quickly when released.
2. Service the throttle system if throttle operation is not smooth, if throttle grip does not return properly. See the VICTORY Service Manual or your authorized VICTORY dealer.

CLUTCH

Squeeze the clutch lever toward the handlebar and release it. It should move freely and smoothly, and it should return to the rest position quickly when released. If the lever fails to perform as stated, service the clutch lever before riding.

FRONT SUSPENSION

Inspect the front forks for oil leaks or damage, and verify smooth suspension operation.

REAR SUSPENSION

Proper rear suspension adjustment is essential for a safe and comfortable ride. Check rear shock absorber movement and preload to ensure the correct amount of suspension travel and ground clearance. See page 93.

⚠ WARNING

Inadequate ground clearance could result in components contacting the ground, causing loss of control resulting in serious injury or death. Always ensure ground clearance is at specification as outlined on page 80.

OPERATION

MOTORCYCLE OPERATION

The operation section describes how to operate your VICTORY motorcycle to ensure the best performance and longevity of the transmission and other components. Follow all safe riding practices outlined in the safety section.

The following information includes explanations of:

- Transmission Break-in Period
- Charging Battery
- Enabling the Drive System
- Shifting Gears
- Accelerating
- Braking
- Disabling the Drive System
- Parking

During the first 600 miles (900 km), critical transmission parts require special wear-in procedures so they seat and mate properly. Read, understand, and use the following operational procedures when operating the motorcycle during the first 600 miles (900 km).

TRANSMISSION BREAK-IN PERIOD

NOTICE: If transmission trouble should occur during the break-in period, consult the Maintenance section of the rider's manual or the VICTORY Service Manual, or see your dealer immediately. Failure to perform the initial maintenance as recommended could result in less than desirable performance in the future. Perform the initial maintenance as recommended.

ODOMETER READING		INSTRUCTIONS
MILES	KILOMETERS	
0–600	0–966	Use NORMAL mode.
0–150	0–241	Operate at no more than 3500 rpm.
150–600	241–966	Operate at no more than 5000 rpm.
At 600	966	Change the transmission oil.

- Perform the pre-ride inspections before each ride.
- Perform periodic maintenance at least once a month, no matter how often you ride.
- Perform an oil change every 3,000 miles (4,800 km), and any other maintenance as determined by the maintenance schedule.

NOTE: Increase the amount of throttle used in small increments during the break-in period.

ENABLING THE DRIVE SYSTEM

1. Insert the key into the key switch.
2. Turn the key switch clockwise to the ON position. The instrument cluster will illuminate briefly as a system check.

NOTE: If the SIDESTAND DOWN message is displayed on the LCD, the motorcycle will not go into Drive mode.

3. Set the RUN/STOP switch to the RUN position to activate the motor controller.

NOTE: Always make sure that the motorcycle is in N (Neutral) before engaging the motor controller. Neutral is located between the second and third gears.

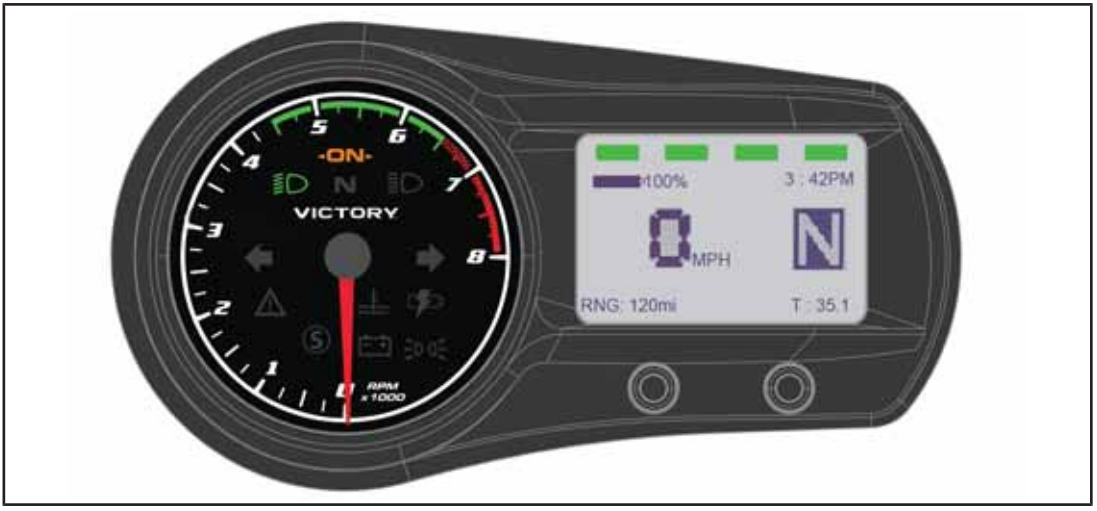
4. Raise the sidestand.

NOTE: The warning message on the LCD will turn off and the warning light will go out.

⚠ WARNING

Make sure the vehicle is in neutral before pressing the Start button. If the vehicle is not in neutral, bumping the throttle could result in unintended vehicle movement.

5. Press and hold the Start button for approximately two seconds to put the motorcycle in Drive mode. The motorcycle performs some system safety checks for a few seconds, and then the Amber ON light will flash indicating that the motorcycle is in Drive mode.



CLUTCH

1. Pull the clutch lever toward the handlebar grip slowly to fully disengage the clutch.
2. Use the gear shifter lever to select a gear.

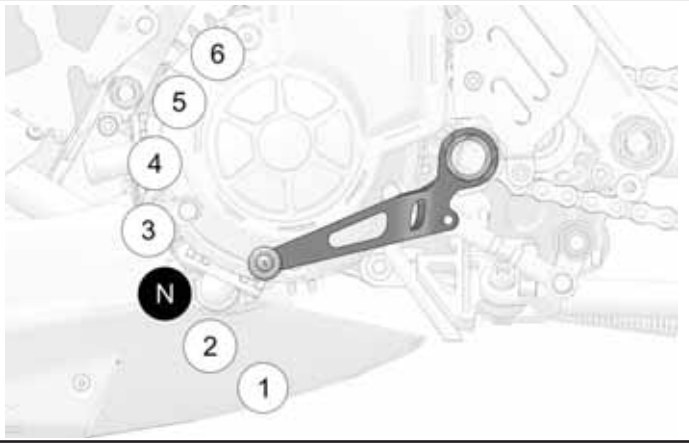
NOTE: Neutral is located between the second and third gears.

3. Release the clutch hand lever slowly to engage the clutch.

USING THE CLUTCH

- ALWAYS use the clutch when shifting between gears.
- NEVER use the clutch when accelerating from a stop. The clutch is not required and will cause excessive clutch wear and contamination of the oil.
- NEVER use the clutch when coming to a stop.

SHIFTING GEARS



NOTE: Neutral is located between second and third gear.

GEAR SHIFT LEVER

The transmission is a six-speed sequential gear box. The selected gear is displayed on the LCD.

- Push the gear shifter lever down to shift the transmission to the next lower gear.
- Lift the gear shifter lever to shift the transmission to the next higher gear.

Release the gear shifter lever after each gear change, the lever must return to its central position before another gear change can be made.

⚠ WARNING

Forced shifting (with clutch engaged) could cause damage to the transmission and drive train. Such damage could cause loss of control, which could result in serious injury or death. On motorcycles equipped with a six-speed transmission, the sixth gear is overdrive.

TIP: The motorcycle may still roll forward even when the transmission is in neutral and the clutch disengaged. If the key switch is on, the neutral indicator illuminates when the transmission is in neutral.

1. Enable the drive system.
2. Pull the front brake lever toward the handlebar.
3. Pull the clutch lever toward the handlebar.
4. Push the shift pedal downward until you feel it stop in second gear, then push down again until it stops in first gear.
5. Release the brake lever.
6. Release clutch lever.
7. Accelerate smoothly and easily to the recommended shift point to shift to a higher gear.
8. Close the throttle completely and disengage the clutch with a quick motion, simultaneously.
9. Move the shift pedal until you feel it stop at the next gear.
10. Release the clutch lever while opening the throttle simultaneously.

TIP: Within the recommended speed ranges, you can downshift to slow the motorcycle or to increase power. You may want to downshift when climbing a hill or passing. Downshifting also helps to decrease speed when combined with closing the throttle.

11. Pull the clutch lever toward the handlebar and close the throttle simultaneously to shift to a lower gear (downshift). Move the shift pedal downward until you feel it stop at the next gear. Simultaneously release the clutch lever while opening the throttle.

⚠ WARNING

Downshifting improperly could cause loss of traction and loss of control, which could result in serious injury or death. Reduce speed before downshifting. Always downshift within the recommended shift points. Use extreme caution when downshifting on wet, slippery, or other low traction surfaces. Release the clutch lever very gradually in these conditions. Avoid downshifting in a curve. Downshift before entering the curve.

RECOMMENDED SHIFT POINTS

Unlike a gas-powered motorcycle where you select a gear to keep the engine speed as low as possible for the terrain, the optimum motor speed for the motorcycle is between 4500 and 6500 RPM regardless of gear position or the current road speed.

If you try to “lug” the motorcycle in a high gear and apply heavy throttle, it puts a very heavy strain on the batteries, which will greatly reduce the operating range of the motorcycle.

ACCELERATING

Accelerate by opening the throttle (rolling the throttle control grip rearward). The more quickly you open the throttle, the more quickly the motorcycle accelerates. For even acceleration, open the throttle with a smooth, continuous motion. When you reach the recommended speed for upshifting, shift up one gear. See page 58.

⚠ WARNING

Accelerating abruptly could cause your body to shift rearward suddenly, which could result in loss of control. Accelerating abruptly could also cause loss of control on low traction surfaces. Loss of control could result in serious injury or death. Always accelerate gradually, especially on wet, slippery, or other low traction surfaces.

NOTE: Remember that N (Neutral) is positioned between the 2nd and 3rd gears.

NOTE: There is no need to slow down to rev-match your downshifts to road speed.

BRAKING

Your motorcycle is equipped with front and rear disc braking systems that are hydraulically activated.

Operating the brake lever applies the callipers on the dual front brake discs.

Depressing the brake pedal applies the calliper on the rear brake disc.

As a general rule, the front braking system provides about 70% of total stopping power. For full braking effectiveness, use both the pedal and the lever simultaneously.

Using both braking systems together will stop your motorcycle faster and with greater stability.

Always allow sufficient stopping distance so that brakes can be applied gradually.

TIP: Applying slightly more front brake than rear brake generally provides the best braking performance.

1. Slow the motorcycle with the brakes, by closing the throttle and applying the front and rear brakes evenly and gradually.
2. Disengage the clutch as the motorcycle slows, or downshift each time vehicle speed reaches a downshift point.
3. Put your left foot down first, then your right foot for support when coming to a stop.

⚠ WARNING

Braking improperly could result in loss of control, which could result in serious injury or death. Avoid braking abruptly. Always apply the brakes gradually, especially on wet, slippery or other low traction surfaces. Avoid braking in a curve or turn. Bring the motorcycle to the upright position before applying the brakes.

REGENERATIVE BRAKING

Your motorcycle has a regenerative braking system installed. Similar to engine braking on a gas-powered motorcycle, whenever the motorcycle is moving and the throttle is not applied, regenerative braking slows the motorcycle and feeds energy back to the high voltage battery.

NOTICE: Regenerative braking is more aggressive when in SPORT mode.

By anticipating stops and simply releasing the throttle to slow down, you can take advantage of the energy gained from regenerative braking to extend the operating range of the motorcycle.

The amount of regenerative braking applied when you release the throttle will vary depending on the mode the motorcycle is operating in.

⚠ WARNING

Regenerative braking does not replace the need to use the brake lever or foot operated brakes to stop the motorcycle. Allow regenerative braking only to slow the motorcycle when it is safe to do so.

NOTE: Regenerative braking will not happen if the battery temperature is too high. See page 68.

DISABLING THE DRIVE SYSTEM

Before disabling the drive system, bring the motorcycle to a complete stop. Shift to neutral or disengage the clutch.

⚠ WARNING

Stopping the motor with the transmission in gear while the motorcycle is moving could cause loss of rear wheel traction or motor and transmission damage, which could cause loss of control and serious injury or death. Always disable the drive system after the motorcycle is fully stopped and the transmission is in neutral. If the motor stops unexpectedly while the motorcycle is moving, guide the motorcycle to a safe location off the road and away from traffic.

DIFFERENT WAYS TO DISABLE THE DRIVE SYSTEM

- Put the sidestand down, the drive system will be temporarily disabled. If the sidestand is then put up, the drive system will be enabled again.
- Set the RUN/STOP switch to the STOP position. This will switch off the drive system.

1. Shift into neutral when fully stopped,.
2. Shut down the motor using the RUN/STOP switch.
3. Move the key switch to the OFF position. Remove the key.

PARKING

Look for a level parking area. If you can't find a paved surface, make sure the ground surface is firm, especially under the sidestand.

SIDESTAND

Use the sidestand to support the motorcycle while parked.

1. Guide the sidestand down using your foot.

NOTE: Lowering the sidestand will disable the drive system.

2. Ensure the sidestand is fully down.

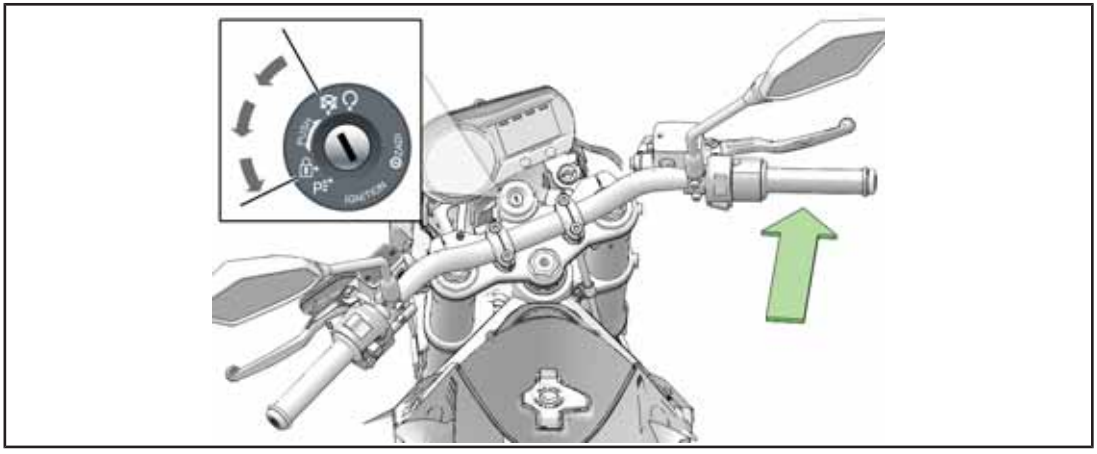
NOTE: If parking on a soft surface is unavoidable, place a sidestand footrest under the foot of the sidestand to provide a firm surface. See page 65.

STEERING LOCK

The steering lock is used to lock the handlebars in place.

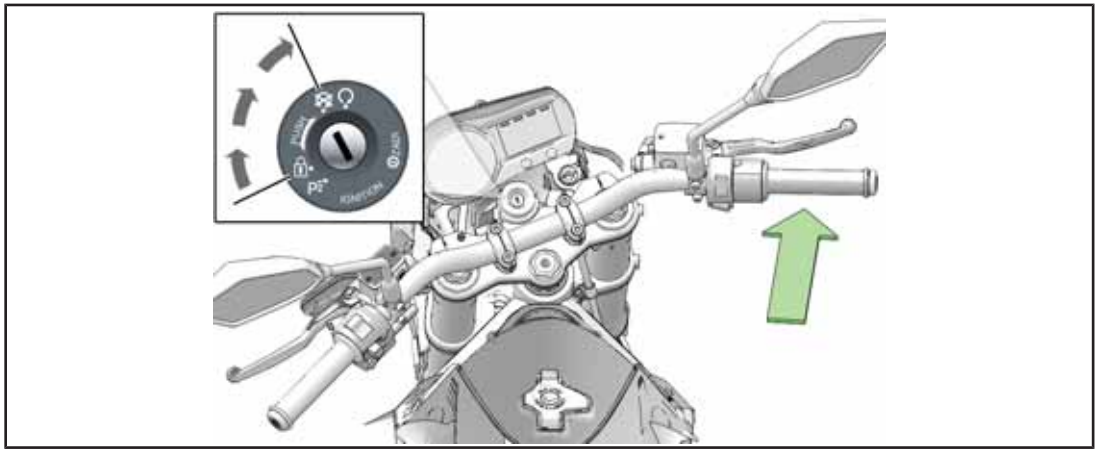
NOTE: You may need to move the handlebars left or right to release any tension on the steering lock and allow the key to rotate freely.

LOCKING THE STEERING



1. Turn the handlebars all the way to the left.
2. Insert the key into the key switch.
3. Push in the key and turn it to the LOCK position (counter-clockwise).
4. Remove the key from the key switch.

UNLOCKING THE STEERING



1. Insert the key into the key switch.
2. Push in the key and turn it to the OFF position (clockwise).

PARKING ON A SLOPE

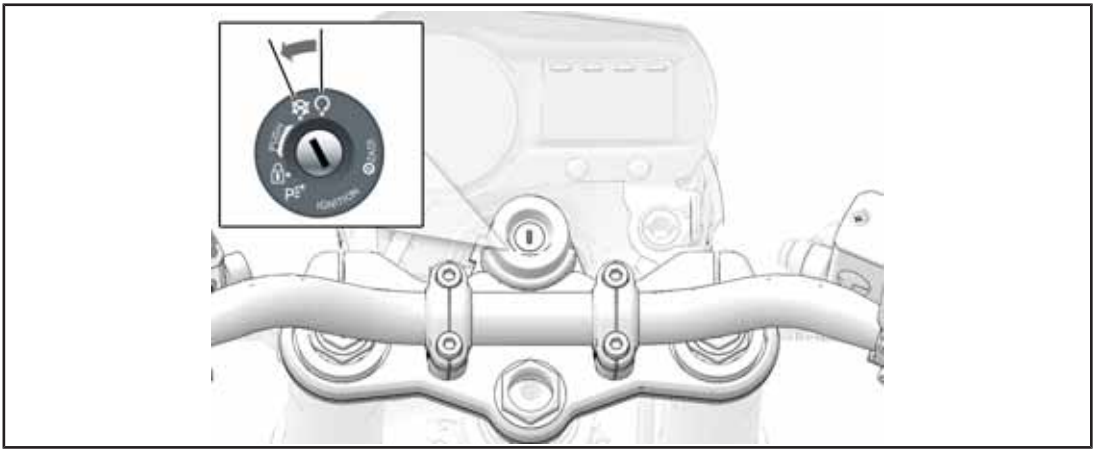
If parking on a slope is unavoidable, position the front of the motorcycle toward the top of the slope. Place the transmission in gear and position the motorcycle so that it is stable when it rests on the sidestand.

Back the rear tire downhill against the curb with the motorcycle at a 45-degree angle to the curb.

PARKING ON A SOFT SURFACE

If parking on a soft surface is unavoidable, place a sidestand footrest under the foot of the sidestand to provide a firm surface. The sidestand footrest must be strong enough and large enough to support the motorcycle's weight without sinking into the parking surface. Asphalt becomes soft in hot weather. A sidestand can sink into soft asphalt and the motorcycle may fall. When parking on asphalt in hot weather, use a sidestand footrest.

TURNING THE MOTORCYCLE OFF



1. Set the RUN/STOP switch to the STOP position to disengage the drive system.
2. Turn the key counter-clockwise to the OFF position. The motorcycle will now power off.

NOTE: If key is left in the ON position after the drive system has been disengaged, energy can still be drained from the batteries. If the kickstand is down and SoC is less than 20% for more than ten minutes, the running lights and display black light will turn off to minimize battery drainage. The headlight will flash intermittently to alert the user to power down the motorcycle. The LCD will also display a warning message stating “IN POWER DOWN MODE”.

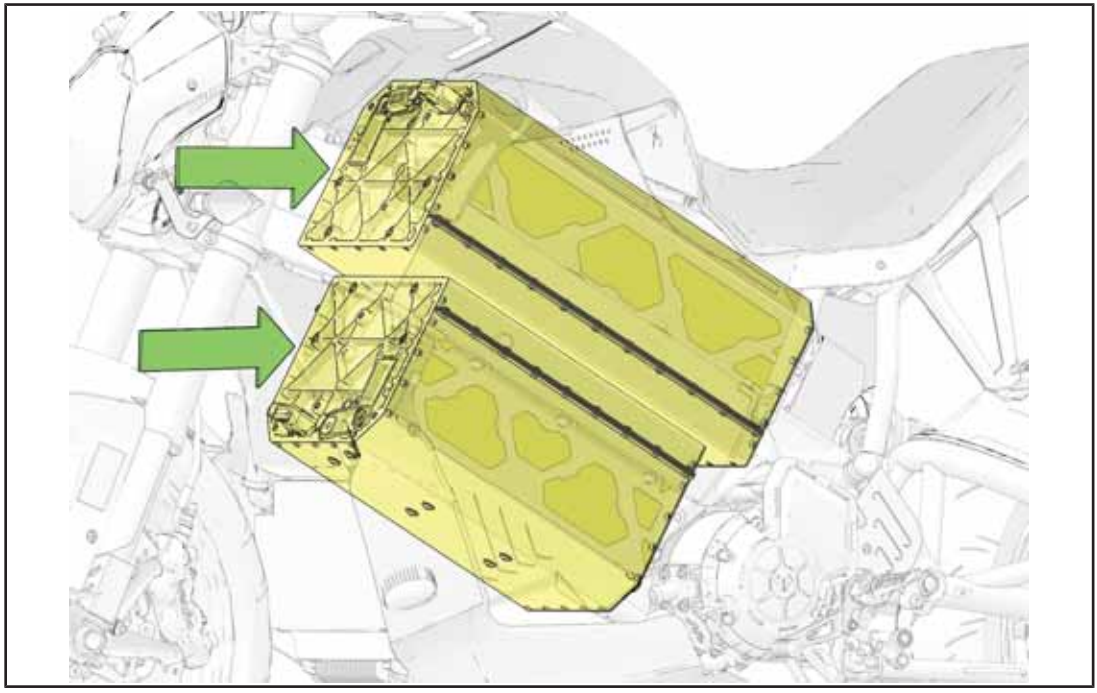
BATTERIES AND CHARGING

GENERAL INFORMATION

This section of the rider's manual covers the charger, onboard battery modules, and batteries. All information regarding charging and keeping your motorcycle's batteries in peak operating condition will be covered here.

Your motorcycle is equipped with:

- Two rechargeable lithium-ion battery modules that combine the advantages of high energy, light weight, long cycle life, and safety. The top module is rated at 5.9 kWh and the bottom module is rated at 4.4 kWh for a total of 10.4 kWh onboard energy storage. In combination, the battery modules provide a nominal voltage of approximately 103.6 volts. Under normal operating conditions, your motorcycle's battery modules are rated for thousands of charge cycles.



- A Battery Management System (BMS) that monitors each battery module's State of Charge, current, cell voltage, and temperature.
- An onboard charger connected to a standard J1772 charging port connector.

Maximizing Battery Capacity and Battery Life:

By following the tips listed below, you can assure long life and high performance of your motorcycle's battery modules.

- Operate your motorcycle at temperatures below 104°F (40°C) and charge at temperatures between 32°F (0°C) and 113°F (45°C).
- Cell balance as often as possible, see page 73. Allow charge cycle to run to 100% completion as often as possible.

- Cycle the batteries (complete charge and discharge) every three months.
- Charge battery modules fully if your motorcycle has been stored for more than a month.

NOTE: Leaving your motorcycle in Charge mode with the charging cable connected will maximize your battery modules' performance when not in use. For winter storage, charge the battery modules from 50–70% SoC and then disconnect the charge cord.

NOTE: Do not leave the motorcycle with the modules at a zero or near zero SOC. Plug in to charge modules as soon as possible when below 20% SOC.

NOTE: Do not open the module enclosure or have it serviced by anyone other than an authorized Victory dealer. Battery warranty will be voided if module enclosure is opened by anybody other than an authorized Victory dealer.

OPERATING IN HIGH TEMPERATURES

B36 Hot Battery Code (see page 36) comes up when the battery temperature gets high. This is seen when riding in hot conditions continuously. When this code comes up, the battery management system starts protecting the batteries by not allowing regeneration or charging.

NOTE: There is not a problem with the bike, it just needs to cool down before it will allow charging. You may experience this when running in hot weather, but it can be remedied by allowing the batteries to cool down.

OPERATING IN LOW TEMPERATURES

The batteries are designed to operate at temperatures as low as 15°F (-10°C). When charging or riding in low temperatures, the battery modules will automatically go through a warm-up phase to optimize performance.

USING THE CHARGING CABLE

⚠ WARNING

Using the charging cable with a worn or damaged wall outlet may cause a fire. Periodically, check the wall plug and charging cord while the vehicle is charging. If the plug feels hot, unplug the charging cord and have the outlet replaced by a qualified electrician.

The motorcycle was supplied with a Level 1 charging cable that connects between the motorcycle's J1772 connector and a standard 110V wall outlet.

ELECTRICAL OUTLETS

Ideally, the wall outlet should be grounded and on a dedicated circuit rated at 15A or more. That means there should be no other major appliances connected to the same circuit.

If a non dedicated circuit is used, the current rating of the wall outlet circuit breaker could be exceeded and cause it to trip or open. If you are having issues using the charging cord at a particular wall outlet, try the following:

- Use another wall outlet if available
- Remove other loads on the same circuit

EXTENSION CORDS

⚠ WARNING

Use of an extension cord may increase the risk of electric shock or other hazards.

The use of an extension cord is not recommended. If an extension cord is used because of limited access to a power outlet, please observe the following guidelines:

- The wall outlet should be Residual Current Device (RCD) protected.
- The extension cord should be RCD protected.
- The extension cord should be 12 or 14 gauge, and must be a 3 pin conductor.
- The extension cord should be rated for outdoor usage.

NOTE: The charging cord automatically detects the amount of current it can draw from the wall outlet. Using an extension cord with a long cord or smaller gauge conductors may prevent the motorcycle from charging.

CONNECTING AND DISCONNECTING THE CONVENIENCE CHARGING CORD

CONNECT THE CHARGING CORD

1. Insert the plug into the wall outlet.
2. Attach the charging connector to the charging port on the motorcycle.

DISCONNECT THE CHARGING CORD

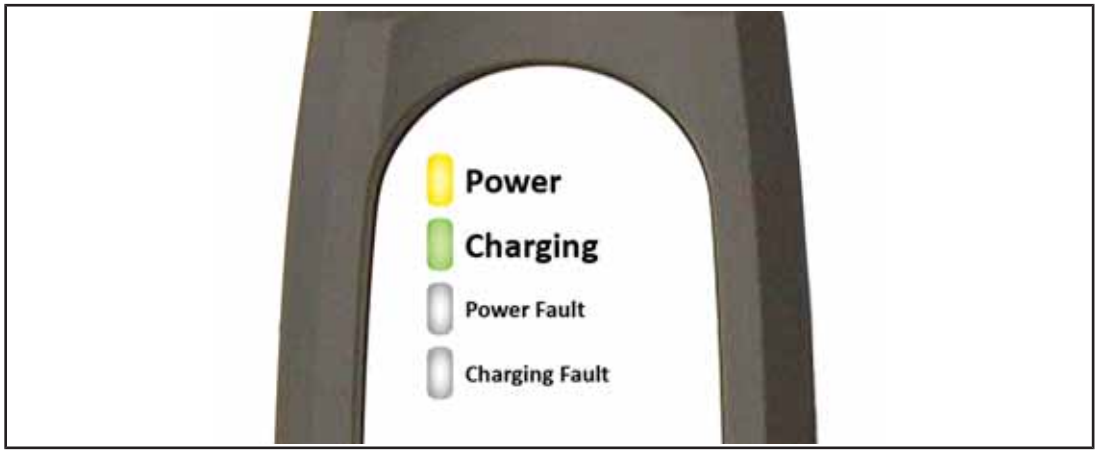
1. Disconnect charging connector from the motorcycle.
2. Remove the plug from the wall outlet.

PUBLIC EV CHARGING STATIONS

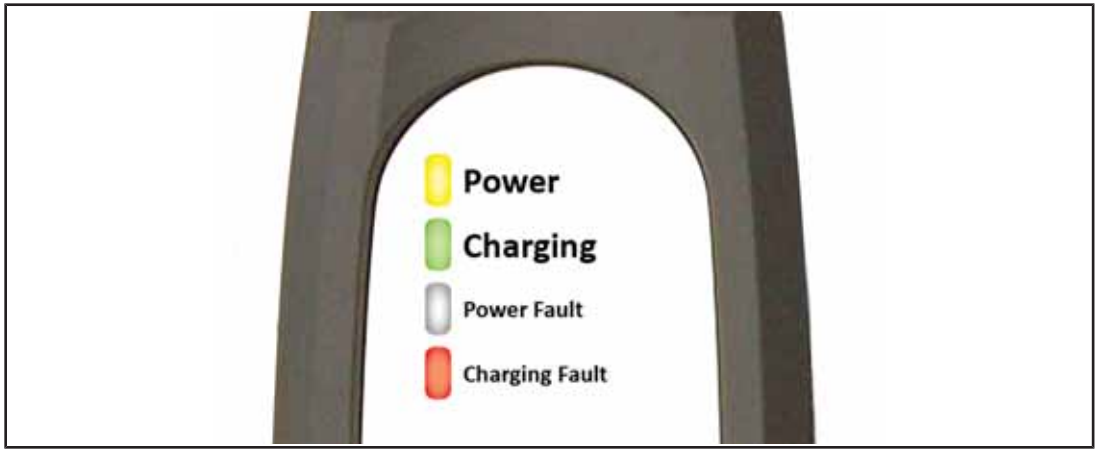
In addition to charging your motorcycle using the supplied charging cable, it is possible to charge it using the network of public EV charging stations. EV charging stations are typically connected to a higher voltage (240V) and are classed as a Level 2 charger. Charging the motorcycle from a Level 2 charger will take less time than when using the supplied charging cable. The procedure for charging the motorcycle using one of these charging stations is exactly the same as using the charging cable.

STATUS INDICATORS

The status indicators on the charging cable illuminate green or flash red to identify the charge cable status.



When both the POWER AND CHARGING indicators are illuminated, the motorcycle will charge.



If any indicator is flashing red, a fault has been detected. For safety reasons, the charging cord will not allow the motorcycle to charge.

The charging cable will automatically attempt to reset itself. If the flashing continues for more than 30 seconds, unplug the charging cord from the wall to reset. If the fault remains, contact your authorized VICTORY dealer for advice.

CHARGING THE MOTORCYCLE

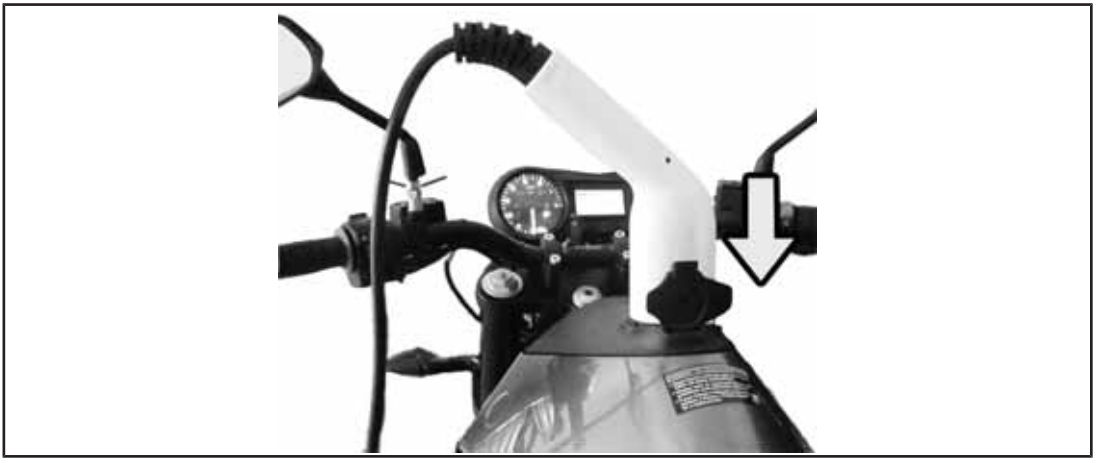
⚠ WARNING

The use of an extension cord is not recommended, as it can increase the risk of electric shock or other hazards (e.g., fire and trip).

Your motorcycle is designed to take a charge from any J1772 electric vehicle charger (Level 1 - 110V or Level 2 - 240V).

1. Plug the charging connector into an AC wall outlet.
2. Position your motorcycle as close as possible to an available AC wall outlet.
3. Open the charging cap on the motorcycle by pressing the vertical tab forward.

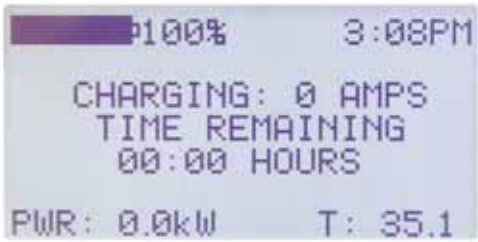
4. Plug the J1772 charging connector into the charging receptacle on the motorcycle. Once connected, charging automatically starts. The key should be removed for security when charging in public.



During charging, the battery charging indicator on the instrument cluster is illuminated orange.

When charging is complete, or at 100% State of Charge (SoC) the battery charging indicator turns green.

The SoC is indicated in the upper-left corner of the LCD. The LCD also displays the estimated time left to charge the motorcycle to 100%.



STOPPING THE CHARGE PROCESS

When charging is complete, or the desired SoC level is reached, unplug the J1772 charger from the motorcycle.

After disconnecting the charge cable, close the charging port cap to prevent dirt and moisture front entering into the charging port.

CHARGING COMPLETE

Once the SoC reaches 99%, the majority of the charging is finished and your motorcycle is ready to ride.

NOTE: Battery balancing occurs at the top of the charge cycle; therefore your motorcycle should be left plugged in periodically.

BATTERY CELL BALANCING

Keeping all of the battery cells balanced is vital for optimal battery performance. VICTORY recommends that you leave your motorcycle in charge mode with AC power connected to allow the cells to balance.

100% STATE OF CHARGE (SOC)

When all of the battery modules report 100% SoC to the Battery Management System, the LCD will display 100%. Typically, you will see the percent SoC toggling between 100% and 99% once all battery modules reach 100% SoC.

CHARGING TIME

The amount of time it takes to fully charge the motorcycle is dependent upon the remaining battery charge level and the available electricity supply (amperage and voltage).

As a guide, the following are approximate times to charge the batteries from fully depleted:

CHARGING TIMES	
Level 1 - 110V	9.5 Hours (0 – 99% SoC, no cell imbalances)
Level 2 - 240V	4 hours (0 – 99% SoC, no cell imbalances)

NOTE: Charging time may be affected by battery temperature. You may plug the charger into the motorcycle, but it will not allow charging to happen until the batteries have cooled. See page 68.

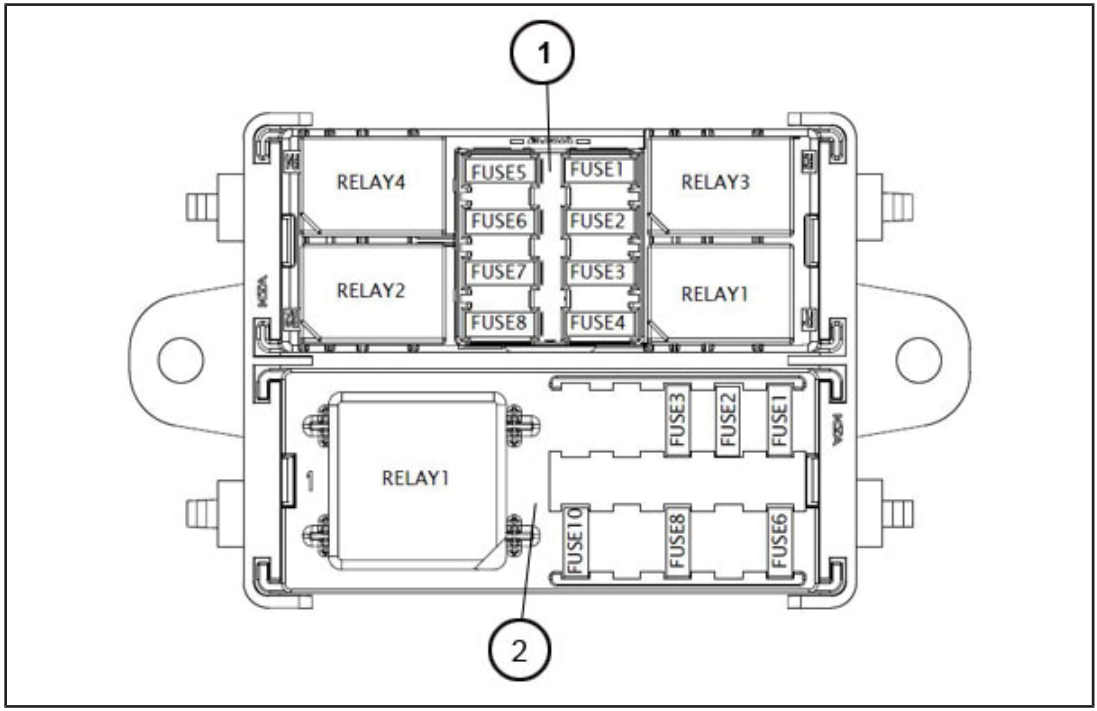
FUSE BOX

⚠ WARNING

To avoid electrical shock, disconnect the Battery Safety Disconnect before replacing the fuses in the high voltage fuse box. Only use replacement fuses of the same rating and type, or fuses of matching specification. Using an incorrect fuse may result in damage to the motorcycle's electrical system and can result in a fire.

All of the electrical circuits on your motorcycle have fuses to protect them from damage caused by excess current flow (short circuit or overload). If something electrical stops working, the first thing you should check for is a blown fuse. Determine from the diagram which fuse or fuses control which component. Check those fuses. Replace any blown fuses and check component operation. If the replacement fuse blows after installation, the system should be checked by your authorized VICTORY dealer or another qualified mechanic.

NOTE: The fuse box is located under the upper body panel directly in front of the charger receptacle. See page 110.



① Low Voltage Fuse Box

② High Voltage Fuse Box

LOW VOLTAGE FUSE BOX

FUSE	RATING	CIRCUIT PROTECTED
1	5A/32V	Vehicle Control Unit
2	5A/32V	Coolant Pump, Cooling Fan
3	10A/32V	Auxiliary Power
4	5A/32V	Handlebar Power
5	5A/32V	Running Lights
6	15A/32V	Headlight
7	5A/32V	Brake Light, Horn
8	5A/32V	Turn Signals

RELAY	COMPONENT
1	Headlight
2	Cooling Pump
3	Auxiliary Power
4	Running Lights

HIGH VOLTAGE FUSE BOX

⚠ WARNING

Do not attempt to access the high voltage fuse box, see your VICTORY dealer. To prevent the risk of an electric shock, always make sure that the key switch is in the OFF position and the key is removed. Never work on the motorcycle if the charging cable is connected.

FUSE	RATING	CIRCUIT PROTECTED
1	5A/125V	DC/DC
2	5A/125V	Battery Management Controller
3	5A/125V	Motor Controller
6	15A/125V	Charger
8	15A/125V	Charger
10	15A/125V	Charger

RELAY	COMPONENT
1	Key Switch

MAINTENANCE

INITIAL MAINTENANCE

Performing initial maintenance will help ensure optimum performance for the entire service life of the motorcycle. Your dealer will change oil, inspect all fluids and serviceable components, ensure that all fasteners are tightened, and make other adjustments as needed.

MAJOR MAINTENANCE

For major repair information, refer to the VICTORY Service Manual. Major repairs typically require technical skills and specially designed tools. Emission system service requires special tools and training and should be performed by your dealer.

PERIODIC MAINTENANCE

Always position the motorcycle on a firm, level surface before performing service. Inspect, clean, lubricate, adjust, and replace parts as necessary. When inspection reveals the need for replacement parts, use genuine VICTORY parts available from your VICTORY dealer. Record service and maintenance information in the Maintenance Record. See page 131. Perform maintenance at the intervals specified in the Periodic Maintenance Table. See page 80. Perform the procedures more frequently if normal use of the motorcycle includes:

- high-speed operation for extended periods
- low-speed operation for extended periods
- operation in dusty or otherwise adverse conditions

Before beginning any maintenance procedure, read the instructions for the entire procedure. During some procedures, you may use potentially hazardous products such as oil or brake fluid. Always follow the instructions and warnings on the product packaging.

⚠ WARNING

Improperly installed or adjusted components can make the motorcycle unstable or hard to handle. Improperly installed electrical components can cause transmission or electrical system failure. In either event, damage or serious injury could result. If you do not have the time, tools, and expertise necessary to complete a procedure properly, please see your dealer for service.

ROAD TESTS

Before returning the motorcycle to regular use, perform a road test in a safe area. Pay special attention to the proper fit and operation of all serviced components. Make any corrections or additional adjustments promptly to ensure safe, reliable, and enjoyable vehicle performance.

PERIODIC MAINTENANCE TABLE

Component	Odometer Reading in Miles (Kilometers)							
	300 (500)	600 (1000)	3000 (4800)	6000 (9600)	9000 (14400)	12000 (19300)	15000 (24100)	18000 (28900)
Battery	Look for visible damage to modules or cables. We recommend you have your authorized VICTORY dealer inspect the batteries.							
**Brake Fluid	I	I	I	R	I	R	I	R
Brake Pads	I	I	I	I	I	I	I	I
Brake Light Switch (Front and Rear)	I	I	I	I	I	I	I	I
Clutch Assembly	Inspect the clutch plate and springs.							
Clutch Lever			L	I	L	I	L	I
Clutch Master Cylinder	I	I	I	I	I	I	I	I
Cooling System	I	I	I	I	I	I	I	I
Coolant								R
Drive Chain	Inspect every 300 miles and after riding in wet and/or dirty areas or after washing the motorcycle. Replace if needed.							
Clutch Fluid	I	I	I	R	I	R	I	R
Gear Oil (warm gearbox before changing)		R	R	R	R	R	R	R
Motor	I	I	I	I	I	I	I	I

Table Key
I Inspect (tighten, clean, adjust, replace as needed)
L Lubricate with proper lubricant
R Replace/Rebuild
P Perform

* Replace at specified interval, or annually.
** Replace at specified interval, or every 2 years.
*** Replace every 5000 mi. (8000 km) if operating in dusty conditions.

Component	Odometer Reading in Miles (Kilometers)							
	300 (500)	600 (1000)	3000 (4800)	6000 (9600)	9000 (14400)	12000 (19300)	15000 (24100)	18000 (28900)
Fasteners	I	I	I	I	I	I	I	I
Front Brake Lever	I	I	I	I	I	I	I	I
**Front Fork Oil							R	
Front Forks/Front Axle	I	I	I	I	I	I	I	I
Headlamp and Signals	I	I	I	I	I	I	I	I
Rear Wheel Alignment	I	I	L	I	L	I	L	I
Rear Shock Absorber	I	I	I	I	I	I	I	I
Rear Brake Pedal	I	I	I	I	I	I	I	I
Road Test	P	P	P	P	P	P	P	P
Sidestand	I	I	I	I	I	I	I	I
Steering Head Bearings	I	I	I	L	I	I	L	I
Swingarm and Rear Axle	I	I	I	I	I	I	I	I
Throttle System	I	I	I	I	I	I	I	I
Tires	I	I	I	I	I	I	I	I
Wheel Condition	I	I	I	I	I	I	I	I

Table Key
I Inspect (tighten, clean, adjust, replace as needed)
L Lubricate with proper lubricant
R Replace/Rebuild
P Perform

* Replace at specified interval, or annually.
** Replace at specified interval, or every 2 years.
*** Replace every 5000 mi. (8000 km) if operating in dusty conditions.

MAINTENANCE SAFETY PRECAUTIONS

⚠ WARNING

Failure to properly follow maintenance instructions and precautions can cause you to be seriously injured or killed. Always follow the procedures and precautions in this rider's manual.

This rider's manual includes instructions on how to perform some important maintenance tasks. If you have basic mechanical skills, you should be able to perform many of these tasks.

Other tasks that are more difficult and require special tools are best performed by professionals. Wheel removal should normally be handled by an authorized VICTORY dealer or a qualified mechanic.

Some of the most important safety precautions follow. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you can, or should perform a given task.

Remember that your authorized VICTORY dealer knows your motorcycle best and is fully equipped to maintain it.

BEFORE STARTING WORK

- Make sure you have the tools and skills required.
- Park it on a firm, level surface, using the sidestand or a maintenance stand to provide support to help prevent the motorcycle from falling over.
- Make sure the motorcycle is off and the key is removed before you begin any maintenance or repair.

ELECTRIC SHOCK HAZARD

⚠ WARNING

Your motorcycle has high-voltage DC and AC electrical systems (103.6V nominal) which can be dangerous and cause personal injury, severe burns, electric shock, and fatal injury unless appropriate precautions are taken.

Your motorcycle has been designed and built with user safety as a priority but please be aware of the following precautions:

- ALWAYS use extreme caution when working with, or around any battery terminals, cables, or other high-voltage components.
- ALWAYS observe and obey the instructions on labels attached to components.
- NEVER disassemble, remove, or replace high-voltage components, cables, or connectors. The high-voltage system has no user serviceable parts.
- ALWAYS disconnect the Battery Safety Disconnect before working on any of the electrical systems. See page 84.

MOVING PARTS

⚠ WARNING

Never run the motor during any service task; there is always the risk of clothing, limbs, or tools coming into contact with rotating components leading to serious injury or death.

BATTERY SAFETY DISCONNECT

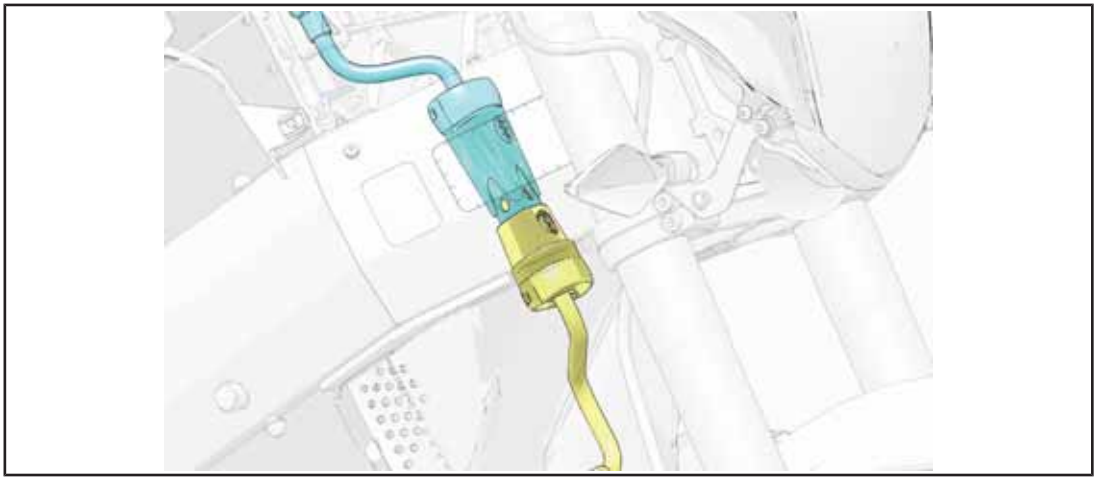
⚠ WARNING

High voltage (103.6V nominal) exists on your motorcycle; use extreme caution when working with, or around any battery terminals, cables, bus bars, or other high-voltage components.

VICTORY recommends that you always disconnect the Battery Safety Disconnect before working on any of the electrical systems.

To disconnect the Battery Safety Disconnect:

1. Remove the upper body insert. See page 111.
2. Remove the front cover. See page 112.
3. Locate the upper and lower halves of the Battery Safety Disconnect.



4. Reach up from the underside of the frame and locate the blue button on the connector.
5. Press the button and separate the two halves of the connector.
6. Position the two halves of the connector outside the frame as a visual reminder to reconnect it when work is complete.

Reconnection

⚠ WARNING

After reconnecting the Battery Safety Disconnect, the motorcycle must be powered on to allow for a full electrical system test and then, if necessary, charged.

To reconnect the Battery Safety Disconnect, position the two halves of the connector in the frame and then fully insert the lower half into the upper half until it ‘clicks’ into position.

ELEVATING THE MOTORCYCLE

Some procedures require raising the motorcycle to remove weight from the component being inspected.

NOTICE: Always disconnect the charge cable before lifting the motorcycle. Never raise the motorcycle when the charge cable is connect, even when charging is not in progress.

⚠ WARNING

Serious injury or death may occur if the motorcycle tips or falls. Make sure the motorcycle will not tip or fall while elevated, or while on the sidestand.

- Elevate the motorcycle by using a safety stand or hoist on a firm, flat surface.
- Ensure the motorcycle is powered off.
- Do not attempt to lift the motorcycle without proper equipment.
- Secure the motorcycle properly before lifting so it cannot tip or fall when elevated.

NEVER position jacks or slings under the following components:

- hoses
- batteries
- motor
- transmission

CAUTION! Make sure the motorcycle is stable when elevated. Injury may occur if the motorcycle tips or falls.

COOLANT

VICTORY recommends the use of Antifreeze 50/50 Premix. This antifreeze is already premixed and ready to use, do not dilute with water.

TRANSMISSION OIL

⚠ WARNING

The motorcycle Two Year Limited Warranty will be invalidated if damage is caused by the use of improper transmission oil. Failure to use an oil that meets the required specification could cause excessive wear, or a build-up of sludge and deposits. It could also result in transmission failure.

Do not use oil additives of any type as transmission damage could occur.

The transmission oil should be changed every 3,000 mi (4,800 km) after the initial break-in period. Depending on riding conditions, it may be necessary to change the oil more frequently. Speak to your authorized VICTORY dealer for more information.

NOTE: There is no oil filter that needs to be replaced or cleaned.

DRAINING THE TRANSMISSION OIL

It is recommended that the transmission oil is drained when the transmission is at its normal operating temperature. Prior to draining the oil, ride the motorcycle for at least 5–10 minutes before stopping and removing the key.

1. Position a drain pan below the transmission.
2. Clean the area around the oil filler plug.

3. Remove the oil filler plug.

4. Remove the oil drain plug and allow the oil to drain.
5. Clean the drain plug and inspect the sealing washer for damage. Replace the washer.
6. Install the drain plug and tighten to 25 Nm.

REFILLING THE TRANSMISSION OIL

The transmission should be filled with the motorcycle standing on level ground and supported on the sidestand.

1. Fill the transmission with approximately 1.0L (1 quart) of Synthetic 10W-30 API GL-1 Motorcycle Oil (wet clutch approved).
2. Install the oil filler plug and tighten to 15 Nm.
3. Clean the exterior of the transmission to remove any oil deposits.

DISPOSAL OF USED TRANSMISSION OIL

⚠ WARNING

It is illegal to pollute drains, water ways or soil. Only use authorized waste disposal sites to dispose of used oil and other fluids from the motorcycle.

DRIVE CHAIN

NOTE: Before commencing any work on your motorcycle, refer to page 82. An 84 link 520 ISO X-Ring Chain connects the motor's 14 tooth sprocket to the rear wheel's 38 tooth sprocket.

The service life of the chain depends on proper lubrication and adjustment. Poor maintenance can cause premature wear or damage to the drive chain or sprockets. The drive chain should be checked, adjusted, and lubricated as part of the pre-ride inspection. See page 45. Under severe usage, or when the motorcycle is ridden in unusually dusty or muddy areas, more frequent maintenance will be necessary.

Before servicing your drive chain, turn the key switch to the OFF position and lower the sidestand. It is not necessary to remove the drive chain to perform the recommended service in the maintenance schedule.

NOTE: The tension of the drive chain should be checked (and adjusted, if necessary) every 300 miles (500 km).

NOTE: The motorcycle should be supported using a rear wheel stand when checking the chain tension.

Check the tension in the lower drive chain at the mid point between the sprockets, this is approximately level with the edge of the tire. The vertical deflection in the drive chain (**A**) should be measured using hand force only (no greater than 1kg (2.2lbs)) and should not exceed 17mm. Rotate the wheel, and repeat the measurement at the same point midway between the sprockets.

It is recommended that you repeat the measurement several times to get an average value for the chain deflection in case there are any tight spots.

Inspect the drive chain for:

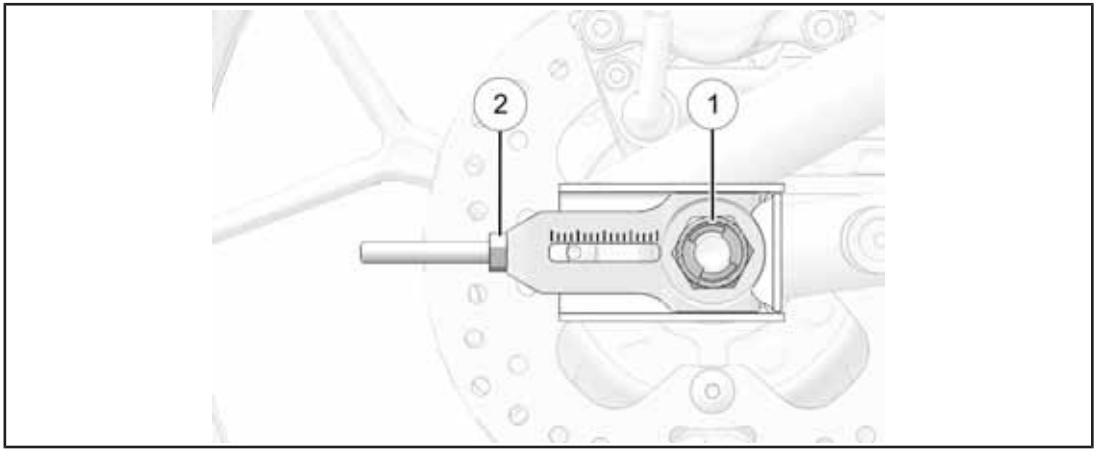
- damaged rollers
- dry or rusted links
- excessive wear
- improper adjustments

Replace the drive chain if it has damaged rollers, loose pins, or kinks that cannot be freed. Lubricate any kinked or binding links and work them free. Adjust chain slack if needed.

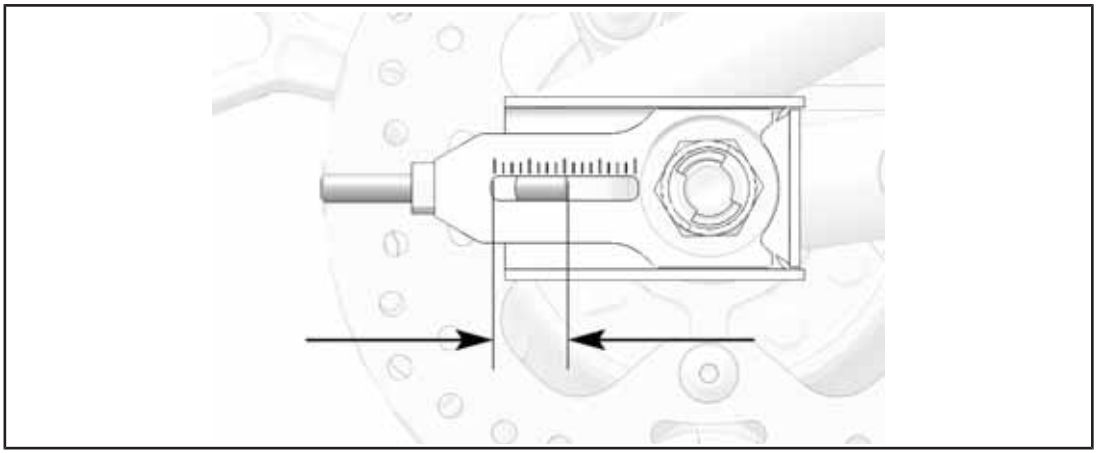
Inspect the front motor sprocket and rear wheel sprocket teeth for excessive wear or damage. If necessary, have your authorized VICTORY dealer replace a worn sprocket.

ADJUSTMENT

1. Place the motorcycle on a rear wheel stand with the key switch in the OFF position.



2. Loosen the rear axle nut ① using a 27 mm wrench or socket.
3. Loosen the lock nuts on the drive chain adjusting bolts on both sides of the swingarm ②.
4. Turn both the left and right drive chain adjusting bolts an equal number of turns until the correct drive chain tension is obtained.
   - Turn the drive chain adjusting bolts clockwise to tighten the chain.
   - Turn the drive chain adjusting bolts counter-clockwise and push the wheel forward to loosen the chain tension. Check the chain tension at a point midway between the front motor sprocket and the rear wheel sprocket. Move the motorcycle forward and recheck the chain tension.



5. Use the measuring marks on the chain adjusters aligned with the end of the swingarm to check the alignment of the swingarm. Make sure that the mark positions are equal on the left and right sides. If the rear axle is misaligned, turn the right or left adjusting bolts until the distances are equal.

6. Torque the rear axle nut to 95 Nm.

CAUTION! If a torque wrench is not used during installation, see your authorized VICTORY dealer as soon as possible to verify proper assembly. Improper assembly may lead to loss of braking capability.

7. Tighten the drive chain adjusting bolts lightly by turning them counter-clockwise, then tighten the lock nuts by holding the drive chain adjusting bolts with a wrench.
8. Recheck the drive chain tension.

CLEANING

Wipe down the O-ring chain with a rag and soapy water, rinse it off with a light spray of water, and when it dries, lubricate the chain with O-ring safe chain spray. The only maintenance an O-ring chain requires is to be kept in adjustment and lubricated regularly to prevent corrosion.

LUBRICATION

Lubricate with a high quality lubricant every 300 miles (500 km), or sooner if the chain appears dry. When operating in wet, hot, dry, and/or dusty conditions, you may need to lubricate the chain more frequently.

NOTE: Removal of the chain is not required for normal maintenance. Replacement of the drive chain requires specialized equipment and should be carried out by your authorized VICTORY dealer.

FRONT AND REAR WHEEL REMOVAL

NOTE: Before commencing any work on your motorcycle, refer to page 82.

We recommend that removal of the wheel be done by your authorized VICTORY dealer or another qualified mechanic. Do not attempt to remove the wheel on your own. Wheel removal requires mechanical skill and professional tools.

SWINGARM INSPECTION

1. Sit in the operator's seat and slowly bounce the rear suspension a few times. Make sure the suspension moves freely without binding. Listen for abnormal noises.
2. Elevate and support the motorcycle with the rear tire slightly off the floor.

CAUTION! Make sure the motorcycle is stable when elevated. Injury may occur if the motorcycle tips or falls.

3. Grasp the rear-most surface of the rear tire and attempt to move the wheel side-to-side. If there is movement at the front of the swingarm, check the swingarm pivot nut torque and swingarm pivot bearings.
4. Contact your VICTORY dealer for service if you detect noise or movement at the swingarm pivot.
5. Grasp the top or bottom surface of the tire and try to move it side-to-side. If there is movement at the rear axle, inspect wheel bearings and rear axle nut torque.
6. Contact your VICTORY dealer for service if you detect noise or movement at the wheel bearings.
7. Rotate the rear wheel slowly with the transmission in neutral. If the wheel does not rotate smoothly, inspect the wheel bearings, rear axle, chain adjustment, and wheel alignment. See the VICTORY Service Manual or your authorized VICTORY dealer.

REAR SUSPENSION

- Spring preload - adjust the spring preload by rotating the two preload rings ①:
  – Counter-clockwise to decrease the preload.
  – Clockwise to increase the preload.

  To adjust the preload back to the original setting used during manufacture, raise the rear wheel off the ground using a safety stand or a hoist. Rotate the preload ring counter-clockwise until it is loose, then rotate the preload ring clockwise four turns.

- Compression damping - rotate the adjuster clockwise to stiffen the damping (+) and counter-clockwise to soften it (-) ②.

NOTE: Factory setting= 18 clicks (2.25 turns) from full in position.

- Rebound damping - rotate the adjuster clockwise to harden (H) the damping and counter-clockwise to soften (s) it ③.

NOTE: Factory setting= 1.25 turns from full in position.

FRONT SUSPENSION

SPRING PRELOAD ADJUSTMENT NUTS (BOTH FORKS)

Adjusting the preload lets you change the “unloaded” sag of the suspension system.

- Turning the nut clockwise increases the spring preload and reduces the “unloaded” sag of the suspension system.
- Turning the nut counter-clockwise decreases the spring preload and increases the “unloaded” sag of the suspension system.

To adjust the spring preload, always start from the minimum preload position (nut turned fully counter-clockwise). Take note of number of turns and adjust both forks equally.

NOTE: Factory setting= three full turns in from the full out position.

REBOUND DAMPING (RIGHT FORK)

Rotate the adjuster screw clockwise to stiffen the damping (+) and counter-clockwise to soften it (-).

NOTE: Factory setting= two full turns out from the full in position.

COMPRESSION DAMPING (LEFT FORK)

Rotate the adjuster screw clockwise to stiffen the damping (+) and counter-clockwise to soften it (-).

NOTE: Factory setting= two full turns out from the full in position.

CLUTCH

⚠ WARNING

Using the wrong fluid or allowing air or contaminants into the fluid system can damage the system seals or result in a malfunction that could lead to serious injury or death.

Your motorcycle is equipped with a hydraulic clutch system. Periodically inspect the clutch fluid level. If the clutch lever does not feel within the normal range, or you have difficulty changing gear while riding, inspect the system to ensure there is not a fluid leak. Contact your authorized VICTORY dealer for assistance.

RECOMMENDED CLUTCH FLUID

⚠ WARNING

Using the wrong fluid or allowing air or contaminants into the fluid system can damage the system seals or result in a malfunction that could lead to serious injury or death.

The recommended fluid is DOT 4 brake/clutch fluid. Be sure to read the label before opening the sealed container.

FLUID LEVEL INSPECTION

NOTE: Before commencing any work on your motorcycle, refer to page 82.

Place your motorcycle in an upright position on a firm, level surface.

The fluid level should be above the **MIN** mark.

If your inspection indicates a low fluid level, have your authorized VICTORY dealer add the recommended brake/clutch fluid. Do not add or replace fluid yourself, except in an emergency. If you do add fluid, have your authorized VICTORY dealer check the system as soon as possible.

THROTTLE SYSTEM

Your motorcycle is equipped with a fly-by-wire electronic throttle. There is no throttle cable or throttle freeplay to inspect or adjust.

THROTTLE INSPECTION

⚠ WARNING

A sticking throttle could result in a runaway condition that could cause a crash in which you can be seriously hurt or killed. If your throttle is sticking, determine what is causing the sticking and remedy the problem before riding your motorcycle.

You should ensure that the throttle assembly is secure and that it operates smoothly and freely. If the throttle assembly is loose or if there is any binding or sticking, inspect the following or contact your authorized VICTORY dealer.

1. Check that the throttle assembly is positioned properly and securely mounted on the handlebars.
2. Check that the throttle housing and throttle grip ① are not binding and are clean of dirt and debris.
3. Check for smooth rotation of the throttle ② from fully open to fully closed. The throttle should snap fully closed when released from fully open.
4. Check that the throttle grip and bar ③ end have adequate clearance.

BRAKES

⚠ WARNING

Using the wrong fluid or allowing air or contaminants into the fluid system can damage the system seals or result in a malfunction that could lead to serious injury or death.

Your motorcycle is equipped with a front and rear hydraulic braking system. As the brake pads wear, the brake fluid levels will drop. A leak in either of the systems will also cause the level to drop. Frequently inspect the systems to ensure there are no fluid leaks.

Periodically inspect the brake fluid levels and the brake pads for wear. If the brake lever or brake pedal freeplay does not feel within the normal range while riding, check the brake pads for wear.

Worn brake pads should be replaced. If the pads are not worn beyond the recommended limit, there is probably air in the brake system. See your authorized VICTORY dealer to have the air bled from the system.

RECOMMENDED BRAKE FLUID

⚠ WARNING

Only use new brake fluid from an airtight container. Fluid from open containers or previously bled from the system will have absorbed moisture, which will adversely affect performance and must not be used.

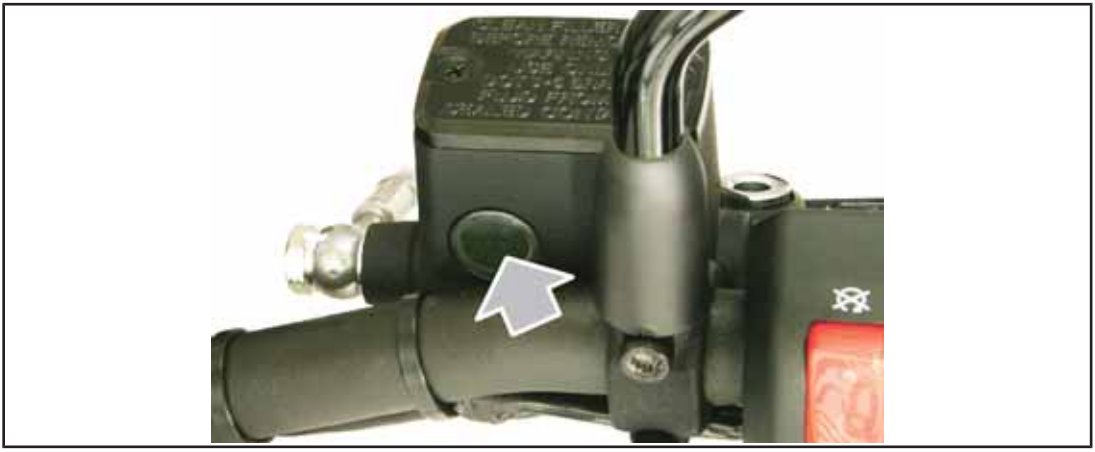
The recommended fluid is DOT 4 brake fluid. Be sure to read the label before opening the sealed container.

NOTICE: Brake fluid will damage painted surfaces and plastic parts. Always clean spilled brake fluid immediately with water and a mild detergent.

FLUID LEVEL INSPECTION

NOTE: Before commencing any work on your motorcycle, refer to page 82.

Place your motorcycle in an upright position on a firm, level surface.



Front brake fluid reservoir: The sight glass should be a solid dark color all the way to the top. Rock the motorcycle slightly to check the level.

Rear brake fluid reservoir: The fluid level should be above the **MIN** mark.

If your inspection indicates a low fluid level, have your authorized VICTORY dealer add the recommended brake fluid. Do not add or replace brake fluid yourself, except in an emergency. If you do add fluid, have your authorized VICTORY dealer check the system as soon as possible.

TIRES

⚠ WARNING

Operating the motorcycle with improper tires or with improper or uneven tire pressure could cause loss of control or accident. Always use the correct size and type of tires specified for your vehicle. Always maintain proper tire pressure as recommended in the rider's manual and on safety labels.

TIRE PRESSURE

NOTE: Before commencing any work on your motorcycle, refer to page 82.

Riding warms the tires and increases tire air pressure. For an accurate reading, check tire pressure before riding. Adjust tire pressure as recommended for the total weight of your intended load.

The recommended “cold” tire pressures are:

Front	36 psi (290 kPa)
Rear	42 psi (290 kPa)

⚠ WARNING

Do not exceed the maximum recommended inflation pressure to seat the bead. Tire or rim failure may result.

TIRE CONDITION INSPECTION

Inspect the tire sidewalls, road contact surface and tread base. If inspection reveals cuts, punctures, cracks, or other wear or damage, replace the tire before riding. Use only approved replacement tires. See the VICTORY Service Manual or your authorized VICTORY dealer.

TIRE TREAD DEPTH

The raised areas at the base of the tread are wear bars. When the road contact surface has worn to the top of the wear bars, replace the tire. For more precise measurement, and for tires not equipped with wear bars, use a depth gauge or an accurate ruler to measure the depth of the center tire tread. Replace the tire if the tread depth is less than 1/16 inch (1.6 mm).

TIRE REPLACEMENT

⚠ WARNING

Mounting improper tires on your motorcycle can affect the handling and stability. This can cause a crash in which you can be seriously hurt or killed. Always use the size and type of tires recommended in this rider's manual.

It is recommended that the replacement of wheels and tires is performed by your authorized VICTORY dealer.

The tires that came on your motorcycle were designed to match the performance capabilities of your motorcycle and provide the best combination of handling, braking, durability, and comfort. You should replace the tires with tires of the same size, load range, and speed rating.

For the recommended tire specifications for your motorcycle, see page 125.

Whenever you replace a tire, remember to have the wheel balanced after the tire is mounted.

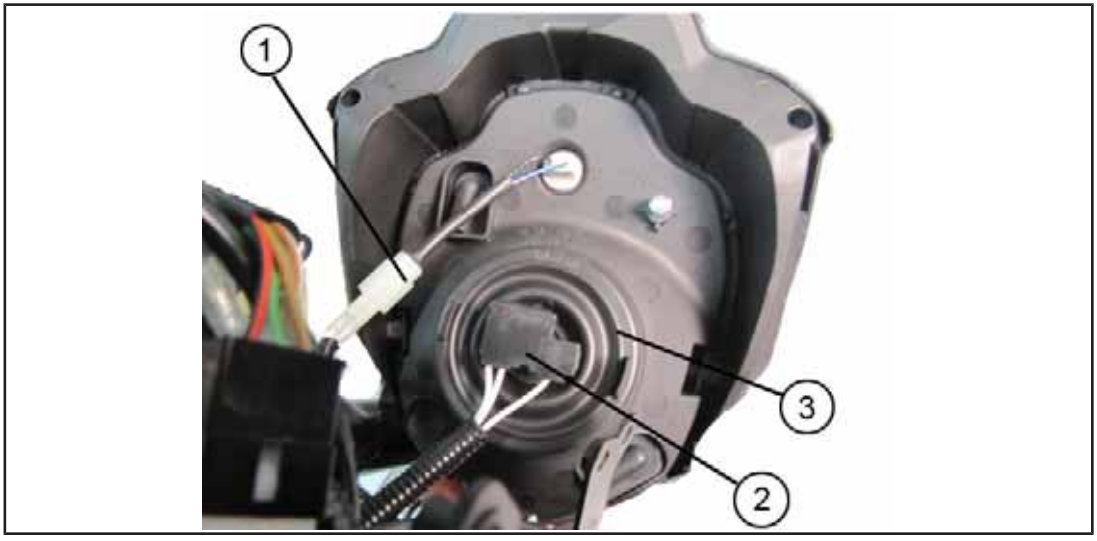
BATTERIES

The battery modules used on the motorcycle are maintenance free. Aside from normal charging, there is no other maintenance to perform on the battery modules. The maintenance schedule requires battery inspection every 3,000 miles (4,800 km). This is a visual inspection to verify that all battery modules are secure, the battery cable bolts are tight, and all modules are properly charged and balanced. See page 73. Verify that all the battery cables are securely attached and the bolts are tight. If you discover a loose battery cable on one of the battery modules contact your authorized VICTORY dealer.

NOTE: In order to maximize the life of the batteries, VICTORY highly recommends cycling the batteries (discharged to 30% SoC or less and then charged to 100% SoC) every three months.

HEADLIGHT LAMP REPLACEMENT

1. Remove the bolts securing the headlamp surround to the headlamp. When reinstalling, torque 1 Nm. Remove the headlamp surround.
2. Remove the bolts securing the headlamp to the mounting bracket. When reinstalling, torque 8.1 Nm.
3. Pull the upper alignment guide out of the sides of head lamp.
4. Support the headlamp and release it forward.
5. Disconnect the white harness connector ① from the headlamp.
6. Disconnect the black headlight connector ②.
7. Pull out the black rubber dust boot ③.



8. Twist the white bulb retainer and pull it out.

CAUTION! Do not pull on the wiring harness or damage will occur. Pull the bulb retainer straight out of the housing.

9. Pull the bulb out.
10. Replace the bulb.
11. Reverse the procedure to reinstall the headlamp.

HALOGEN LAMPS

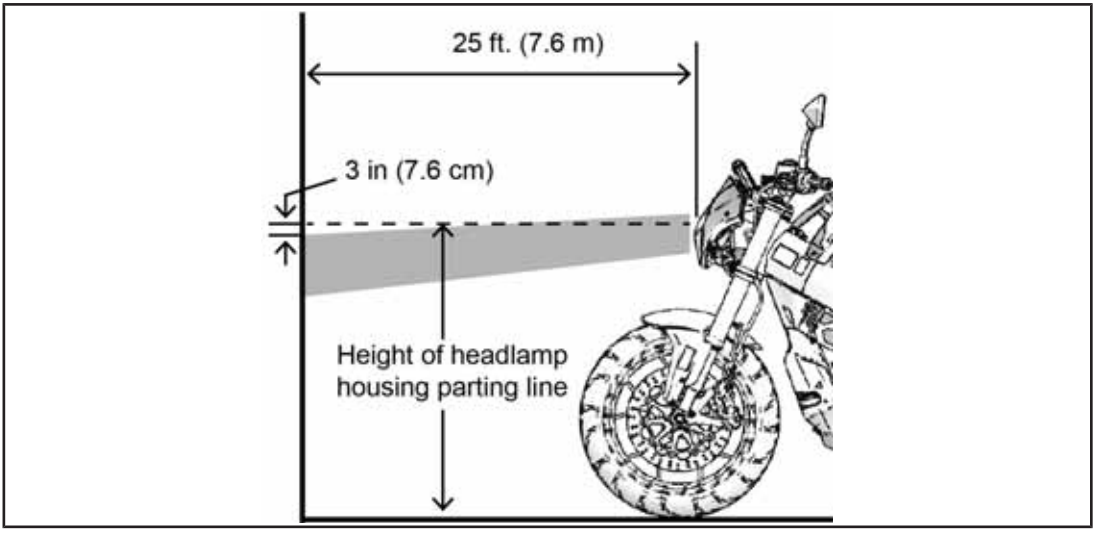
1. Remove the bolts securing the headlamp surround to the headlamp. When reinstalling, torque 1 Nm. Remove the headlamp surround.
2. Remove the bolts securing the headlamp to the mounting brackets and collect the washers. When reinstalling, torque 8.1 Nm.
3. Support the headlamp and release it from the mounting brackets.
4. Disconnect the harness connector from the headlamp assembly.
5. Pull the parking lamp bulb holder from the headlamp assembly.

CAUTION! Do not pull on the wiring harness or damage will occur. Pull the bulb retainer straight out of the housing.

6. Reverse the removal procedure to reinstall the headlamp.

TIP: Avoid touching a halogen lamp with bare fingers. Oil from your skin leaves a residue, causing a hot spot that will shorten the life of the lamp. If a lamp is touched, clean it thoroughly with denatured alcohol.

HEADLIGHT AIM INSPECTION



The top edge of the high beam must be 3 inches (7.6 cm) below the height of the headlight housing parting line and centered straight ahead at 25 feet (7.6 m).

1. Verify that tire pressure is at specification. See page 100.
2. Verify that rear suspension ride height (preload) is at specification. Include rider, passenger (if applicable), and cargo when setting preload. See page 125.
3. Position the motorcycle on a level surface with the headlight 25 feet (7.6 m) from a wall. With the operator and passenger (if applicable) on board, bring the motorcycle to the fully upright position.
4. Move the key switch to the ON position and switch the headlamp to high beam. Observe the headlight aim on the wall.
5. Make any necessary adjustments to headlight aim.

HEADLIGHT AIM ADJUSTMENT

The headlight should be adjusted by your authorized VICTORY dealer, unless you have the proper tools, service data, and are mechanically qualified.

BRAKE LIGHT BULB REPLACEMENT

The LED brake light bulb is non serviceable. See your authorized VICTORY dealer to have the brake light assembly replaced.

TURN SIGNAL BULB REPLACEMENT

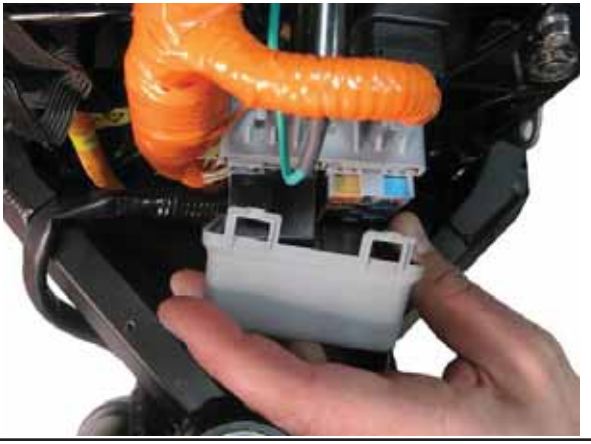
1. Remove the small screw in the back of the turn signal light.
2. Lift the lens where the screw was removed and disengage the plastic catch on the opposite side of the lens.
3. Remove the bulb.
4. Replace the bulb.
5. Reverse this procedure to reinstall the turn signal.

LICENSE PLATE LIGHT BULB REPLACEMENT

The license plate light can be pulled out and replaced. Remove the brake light cover and pull the white wires out by grasping the rear of the rubber socket and pulling towards the front of the vehicle.

FUSE REPLACEMENT

1. Remove the upper body panel. See page 110.
2. Remove the front cover. See page 112.
3. Release the tabs on each corner of the fuse box cover and remove the cover.

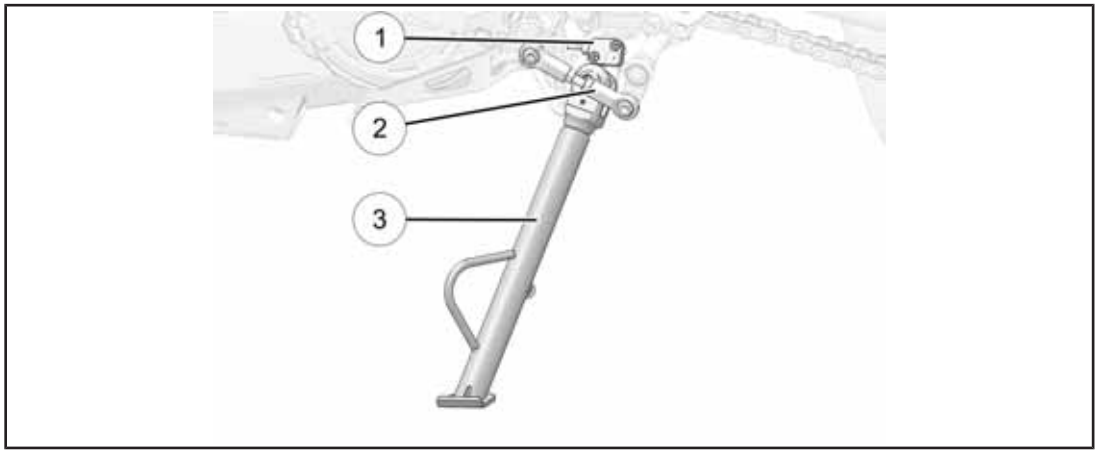


4. Remove the damaged fuse and seat the new fuse firmly in its place.
5. Reinstall the fuse box cover with the safety label upright facing toward the front of the motorcycle.
6. Reinstall the upper body panel and front cover.

NOTE: Use fuses with the recommended amperage to avoid damage to the electrical system.

SIDESTAND

NOTE: Before commencing any work on your motorcycle, refer to page 82.



① Sidestand sensor
② Sidestand magnet
③ Sidestand spring

INSPECTION

1. Check that the sidestand assembly is working properly. If the sidestand is stiff or squeaky, clean the pivot area and lubricate the pivot pin with clean grease.
2. Check the sidestand spring for damage or loss of tension.
3. Check the sidestand system cut-off:
   - Power up the motorcycle in Drive mode. See page 55.
   - Raise the sidestand. The drive system should be enabled.
   - Lower the sidestand. The drive system should be disabled.

NOTE: If the drive system doesn't enable with the sidestand up or disable with the sidestand down, contact your authorized VICTORY dealer for service.

REMOVAL AND INSTALLATION OF BODY PANELS

⚠ WARNING

To prevent the risk of an electric shock, always make sure that the key switch is in the OFF position and the key is removed. Never work on the motorcycle if the charging cable is connected.

The removal of some of the body panels is required for normal inspection and service of the motorcycle. Use the following procedures to remove the body panels as required.

SEAT REMOVAL

1. Remove the bolt securing the seat assembly to the motorcycle and collect the washers.
2. Lift the rear of the seat and remove.

SEAT INSTALLATION

⚠ WARNING

Riding with a loose or incorrectly fitted seat could cause you to crash and be seriously injured.

1. Position the seat on the motorcycle and make sure the seat tongue is inserted into the mounting bracket.
2. Fit the seat retaining bolt and washers and tighten to 8 Nm.
3. Check that the front and rear edges of the seat are firmly secured to the motorcycle.

UPPER BODY PANEL

1. Remove the seat. See page 108.

2. Remove the two bolts securing the rear of the upper body panel to the frame. Collect the washers.

3. Remove the two bolts securing the front of the upper body panel to the frame.
4. Lift the rear of the upper body panel and carefully slide the upper body panel rearwards to release it from the upper body insert.
5. Remove the upper body panel.

NOTE: Always store body panels face up to prevent the painted surfaces from becoming scratched.

UPPER BODY PANEL INSTALLATION

1. Position the upper body panel on the motorcycle and make sure it is correctly located under the upper body insert.

NOTE: When positioning the panel, make sure that no harnesses or cables will be trapped between the panel and the frame.

2. Install the four retaining bolts loosely to correctly align the panel to the frame.
3. Tighten the four bolts to 1 Nm.
4. Install the seat. See page 108.

UPPER BODY INSERT

1. Remove the upper body panel. See page 110.

2. Remove the bolt securing the rear of the upper body insert to the frame.

3. Remove the two bolts securing the front of the upper body panel to the frame.

4. Remove the upper body insert.

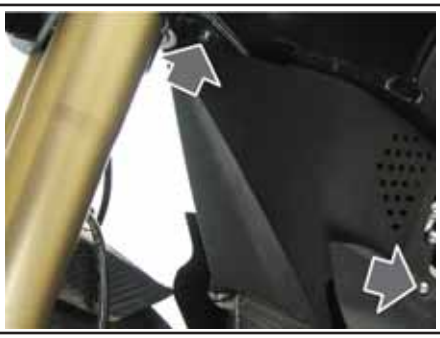
UPPER BODY INSERT INSTALLATION

1. Position the upper body insert on the motorcycle and make sure it is correctly located around the charging connector.

NOTE: When positioning the panel, make sure that no harnesses or cables will be trapped between the panel and the frame.

2. Install the three retaining bolts loosely to correctly align the panel to the frame.
3. Tighten the three bolts to 1 Nm.
4. Install the upper body panel. See page 110.

FRONT COVER



1. Remove the two upper bolts securing the front cover to the frame.
2. Remove the two lower bolts securing the front cover to the radiator mounting bracket.
3. Release the front cover carefully from the body panel and remove.

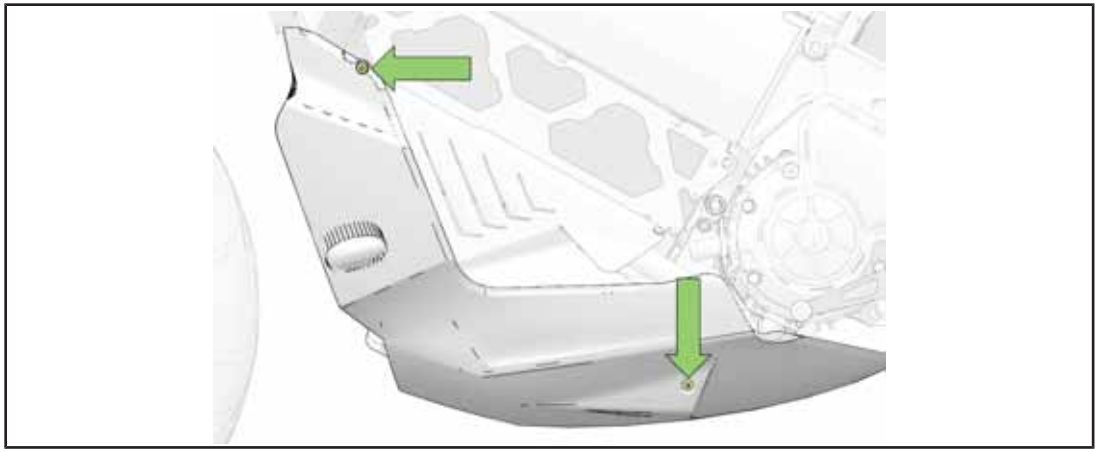
FRONT COVER INSTALLATION

1. Position the front cover and make sure it is correctly located inside the body panel.

NOTE: When positioning the panel, make sure that no harnesses or cables will be trapped between the panel and the frame.

2. Install the retaining bolts loosely to correctly align the panel to the frame and body panel.
3. Tighten the four bolts to 1 Nm.

LOWER BODY PANEL



1. Remove the two upper bolts securing the body panel to the radiator mounting bracket.
2. Remove the two lower bolts securing the body panel to the motor controller mounting bracket.
3. Carefully remove the body panel.

INSTALLATION

1. Position the body panel and loosely install the retaining bolts to correctly align the panel to the mounting brackets.
2. Tighten the four bolts to 1 Nm.

CLEANING AND STORAGE

CLEANING YOUR MOTORCYCLE

⚠ WARNING

Do not use a pressure washer to clean your motorcycle. High-pressure water (or air) may damage certain parts of you motorcycle. Never aim jets of water at the batteries or other electrical components. Damage caused from using a pressure washer will not be covered by the warranty.

Frequent cleaning and polishing will keep your motorcycle looking newer for longer. A clean motorcycle is also easier to inspect and service.

To clean your motorcycle, you may use:

- Water
- A mild, neutral detergent and water
- A mild spray and wipe cleaner/polisher
- A mild spray and rinse cleaner/degreaser and water

Avoid products that contain harsh detergents or chemical solvents that could damage the metal, paint, and plastic on your motorcycle. Park in a shady area. Washing your motorcycle in bright sunlight may cause the finish to fade. Spotting is also more likely because surface water can dry before you have time to wipe it off. Clean your motorcycle regularly to protect surface finishes.

WASHING

NOTE: We recommend the use of a garden hose to wash your motorcycle. High-pressure washers (like those at coin-operated car washes) can damage certain parts.

1. Wash your motorcycle with a sponge or a soft towel, mild detergent, and plenty of water.
2. Use care when cleaning the matte plastic parts (dash and side panels), which can scratch easier than the other parts of your motorcycle.
3. Rinse your motorcycle thoroughly with plenty of clean water after washing to remove any detergent residue.
4. Dry your motorcycle with a chamois or a soft, dry towel.
5. Use a spray cleaner/polish or a quality liquid or paste wax on the painted body panels (fenders) (apply according to the container instructions).
6. Touch up any chipped paint or scratches (contact your authorized VICTORY dealer for touch-up paint).
7. Inspect for damage, wear, and leaks after cleaning.
8. Lubricate the chain to prevent rusting.
9. Ride your motorcycle at a slow speed and apply the brakes several times as a precaution. This will help dry the brakes and restore normal braking.

REMOVING MARKS

TYPE OF MARK	RECOMMENDED CLEANING
Dust and fingerprint	Apply a spray cleaner/polish and wipe it with a non-abrasive cloth.
Light road grime.	Spray any difficult-to-reach or very dirty areas with a spray cleaner/ degreaser. Rinse and dry. Apply a spray cleaner/polish and wipe with a non-abrasive cloth.
Heavy grime and brake dust.	Use a spray cleaner/degreaser. If necessary, rub with a sponge. Rinse and dry. Apply a spray cleaner/ polish and wipe with a non-abrasive cloth.

PAINTED ALUMINUM WHEELS

Aluminum may corrode from contact with dirt, mud, or road salt. Clean the wheels after riding through any of these substances. Use a wet sponge and mild detergent. Avoid stiff brushes, steel wool, or cleaners containing abrasives or chemical compounds. After washing, rinse with plenty of water and dry with a clean cloth. If the paint is chipped, apply touch-up paint.

MATTE SURFACES

Use a soft cloth or sponge, plenty of water, and mild detergent to clean the matte surfaces. Dry with a soft, clean cloth.

Do not use polishing compounds or wax containing polishing compounds on these surfaces. These can damage or discolor the surface.

STORAGE

If you won't be riding for an extended period, such as during the winter, thoroughly inspect your motorcycle and correct any problems before storing it. That way, needed repairs won't be forgotten and it will be easier to get your motorcycle running again.

We suggest you perform the following procedures to keep your motorcycle in top condition and to reduce the deterioration that can occur during storage.

PREPARATION FOR STORAGE

1. Wash and dry your motorcycle. Wax all painted surfaces (except matte surfaces).
2. Lubricate the drive chain. See page 91.
3. Inflate the tires to their recommended pressures. See page 100.
4. Store your motorcycle in a dry, unheated area that is away from sunlight and has minimal daily temperature variation.
5. Place your motorcycle on stands to lift both tires off the floor.
6. Cover your motorcycle with a porous material. Avoid using plastic or similar non-breathing materials that restrict air flow and allow heat and moisture to accumulate.

EXTENDED STORAGE PERIOD

In order to maximize the life of the batteries, the following guidelines should be followed for an extended storage period:

- Store the motorcycle with a State of Charge (SoC) between 50% and 70%.
- Store the motorcycle in temperatures between 32°F and 75°F (0°C and 24°C).
- Check the SoC of the batteries and charge periodically, if necessary.
- Disconnect the Battery Safety Disconnect.

⚠ WARNING

After reconnecting the Battery Safety Disconnect, the motorcycle must be powered on to allow for a full electrical system test and then, if necessary, charged.

REMOVAL FROM STORAGE

1. Uncover and clean the motorcycle.
2. Connect the Battery Safety Disconnect.
3. Charge the motorcycle fully. See page 72.
4. Lubricate the drive chain. See page 91.
5. Perform a pre-ride inspection. See page 45. Test ride your motorcycle at low speeds.

WARRANTY

VICTORY MOTORCYCLES WARRANTY POLICY

MOTORCYCLE LIMITED WARRANTY – ELECTRIC MOTORCYCLES

Victory Motorcycles Division, Polaris Sales Inc., P.O. Box 47700, Hamel, Minnesota 55340-9960 gives a TWO YEAR LIMITED WARRANTY on all components (except battery pack) of your Victory motorcycle against defects in material or workmanship. The battery pack is covered under the Five Year Limited Warranty set forth below. This TWO YEAR LIMITED WARRANTY covers parts and labor charges for repair or replacement of defective parts and begins on the date of purchase by the original retail purchaser. This warranty is transferable to another owner during the warranty period through an authorized Victory Motorcycles dealer, but any such transfer will not extend the original term of the warranty. The duration of this warranty may vary by international region based upon local laws and regulations.

BATTERY PACK LIMITED WARRANTY

Victory Motorcycles Division, Polaris Sales Inc. gives a FIVE YEAR, 100,000 mile LIMITED parts and labor warranty on the battery pack against defects in material or workmanship. The FIVE year, 100,000 mile term begins on the purchase date, is fully transferrable and has no deductible. The term ends 5 years after purchase, or after 100,000 miles, whichever occurs first.

All batteries experience some reduction in capacity/range over time. A capacity/range reduction of 30% or less during the battery warranty period does not constitute a defect. Any capacity/range reduction-based claim must be confirmed by an authorized Victory dealer and approved by Victory Motorcycles to be eligible for coverage. In addition to the WARRANTY COVERAGE EXCLUSIONS listed below, the battery warranty also excludes failure, damage or capacity loss to the batteries caused by neglect, lack of charging or not following the recommended maintenance schedule outlined in the Owner's Manual.

REGISTRATION

At the time of sale, the Warranty Registration Form must be completed by your dealer and submitted to Victory Motorcycles within ten days of purchase. Upon receipt of this registration, Victory Motorcycles will record the registration for warranty. No verification of registration will be sent to the purchaser as the copy of the Warranty Registration Form will be your proof of warranty coverage. If you have not signed the original registration and received the customer copy, please contact your dealer immediately. NO WARRANTY COVERAGE WILL BE ALLOWED UNLESS YOUR MOTORCYCLE IS REGISTERED WITH VICTORY MOTORCYCLES. Initial dealer preparation and set-up of your motorcycle is very important in ensuring trouble-free operation. Purchasing a vehicle in the crate or without proper dealer set-up will void your warranty coverage.

WARRANTY COVERAGE AND EXCLUSIONS FOR 2 YEAR LIMITED WARRANTY & 5 YEAR LIMITED, 100,000 MILE BATTERY PACK WARRANTY

LIMITATIONS OF WARRANTIES AND REMEDIES

This Victory Motorcycles limited warranty excludes any failures that are not caused by a defect in material or workmanship. **THIS WARRANTY DOES NOT COVER CLAIMS OF DEFECTIVE DESIGN.** This warranty also does not cover acts of God, accidental damage, normal wear and tear, abuse or improper handling. This warranty also does not cover any motorcycle, component, or part that has been altered structurally, modified, neglected, improperly maintained, used for racing, competition, or for purposes other than for which it was designed.

This warranty excludes damages or failures resulting from: improper lubrication; surface imperfections caused by external stress, heat, cold or contamination; operator error or abuse; improper component alignment, tension, adjustment or altitude compensation; snow, water, dirt or other foreign substance ingestion/contamination; improper maintenance; modified components; use of aftermarket or unapproved components, accessories, or attachments; unauthorized repairs; or repairs made after the warranty period expires or by an unauthorized repair center.

This warranty excludes damages or failures caused by abuse, accident, fire, or any other cause other than a defect in materials or workmanship and provides no coverage for consumable components, general wear items, or any parts exposed to friction surfaces, stresses, environmental conditions and/or contamination for which they were not designed or not intended, including but not limited to the following items:

- Wheels and tires
- Suspension components
- Brake components
- Seat components
- Clutches and components
- Steering components
- Light bulbs/Sealed beam lamps
- Lubricants
- Finished and unfinished surfaces
- Fuel Injectors/Throttle body components
- Hydraulic components and fluids
- Circuit breakers/Fuses
- Electronic components
- Sealants
- Bearings
- Bushings

LUBRICANTS AND FLUIDS

1. Damage or failure resulting from the use of non-recommended lubricants or fluids is not covered by this warranty.

This warranty provides no coverage for personal loss or expense, including mileage, transportation costs, hotels, meals, shipping or handling fees, motorcycle pick-up or delivery, replacement rentals, loss of vehicle use, loss of profits, or loss of vacation or personal time.

THE EXCLUSIVE REMEDY FOR BREACH OF THIS WARRANTY SHALL BE, AT VICTORY MOTORCYCLES'S OPTION, REPAIR OR REPLACEMENT OF ANY DEFECTIVE MATERIALS, COMPONENTS, OR PRODUCTS. THE REMEDIES SET FORTH IN THIS WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS WARRANTY. VICTORY MOTORCYCLES SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE, OR OTHER TORT OR OTHERWISE. THIS EXCLUSION OF CONSEQUENTAL, INCIDENTAL, AND SPECIAL DAMAGES IS INDEPENDENT FROM AND SHALL SURVIVE ANY FINDING THAT THE EXCLUSIVE REMEDY FAILED OF ITS ESSENTIAL PURPOSE.

THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS EXCLUDED FROM THIS LIMITED WARRANTY. ALL OTHER IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY) ARE LIMITED IN DURATION TO THE ABOVE 2 OR 5 YEAR, 100,000 MILE WARRANTY PERIOD. Victory Motorcycles DISCLAIMS ALL EXPRESS WARRANTIES NOT STATED IN THIS WARRANTY. SOME STATES DO NOT PERMIT THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ALLOW LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU IF INCONSISTENT WITH CONTROLLING STATE LAW.

HOW TO OBTAIN WARRANTY SERVICE

If your motorcycle requires warranty service, you must take it to a Victory Motorcycles Servicing Dealer. When requesting warranty service you must present your copy of the Warranty Registration From to the dealer. (THE COST OF TRANSPORTATION TO AND FROM THE DEALER IS YOUR RESPONSIBILITY). Victory Motorcycles suggests that you use your original selling dealer; however, you may use any Victory Motorcycles Servicing Dealer to perform warranty service.

In the Country where your motorcycle was purchased:

Warranty or Service Bulletin repairs must be done by an authorized Victory Motorcycles dealer. If you move or are traveling within the country where your motorcycle was purchased, Warranty and Service Bulletin repairs may be requested from any authorized Victory Motorcycles dealer.

Outside the Country where your motorcycle was purchased:

If you are traveling temporarily outside the country where your motorcycle was purchased, you should take your motorcycle to an authorized Victory Motorcycles dealer. You must show the dealer photo identification from the country of the selling dealer's authorized location as proof of residence. Upon residence verification, the servicing dealer will be authorized to perform the warranty repair.

If you move:

If you move to another country, be sure to contact Victory Motorcycles Customer Assistance and the customs department of the destination country before you move. Vehicle importation rules vary considerably from country to country. You may be required to present documentation of your move to Victory Motorcycles in order to continue your warranty coverage. You may also be required to obtain documentation from Victory Motorcycles in order to register your motorcycle in your new country. You should warranty register your motorcycle at a local Victory Motorcycles dealer in your new country immediately after you move to continue your warranty coverage and to ensure that you receive information and notices regarding your motorcycle.

If you purchase from a private party:

If you purchase a Victory Motorcycles from a private party, to be kept and used outside of the country in which the motorcycle was originally purchased, all warranty coverage will be denied. You must nonetheless register your motorcycle under your name and address with a local Victory Motorcycles dealer in your country to ensure that you receive safety information and notices regarding your motorcycle.

EXPORTED VEHICLES

EXCEPT WHERE SPECIFICALLY REQUIRED BY LAW, THERE IS NO WARRANTY OR SERVICE BULLETIN COVERAGE ON THIS VEHICLE IF IT IS SOLD OUTSIDE THE COUNTRY OF THE SELLING DEALER'S AUTHORIZED LOCATION. This policy does not apply to vehicles that have received authorization for export from Victory Motorcycles. Dealers may not give authorization for export. You should consult an authorized dealer to determine this vehicle's warranty or service coverage if you have any questions. This policy does not apply to vehicles registered to government officials or military personnel on assignment outside the country of the selling dealer's authorized location. This policy does not apply to Safety Bulletins.

NOTICE

If your vehicle is registered outside of the country where it was purchased and you have not followed the procedure set above, your vehicle will no longer be eligible for warranty or service bulletin coverage of any kind, other than *safety* bulletins. Vehicles registered to Government officials or military personnel on assignment outside of the country where the vehicle was purchased will continue to be covered by the Limited Warranty.

Please work with your dealer to resolve any warranty issues. Should your dealer require any additional assistance, they will contact the appropriate person at Victory Motorcycles.

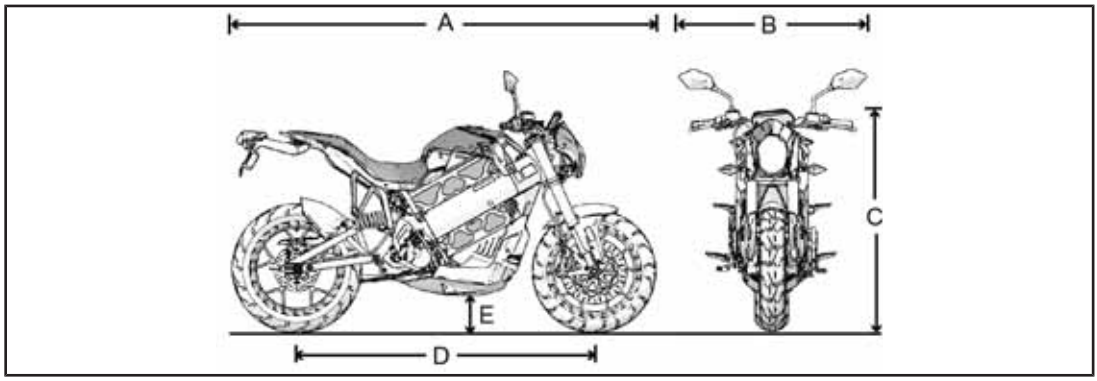
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or in different countries. If any of the above terms are void because of federal, state, local law, all other warranty terms will remain in effect.

For questions call Victory Motorcycles Customer Assistance:

United States & Canada: 1-877-204-3697

French: 1-800-268-6334

SPECIFICATIONS



EMPULSE TT	
Dimensions	
Overall Length	(A) 81.3 in (206.5 cm)
Overall Width	(B) 31.8 in (80.8 cm)
Overall Height	(C) 42.6 in (108.2 cm)
Seat Height	29.3 in (74.3)
Wheelbase	(D) 58.0 in (147.3 cm)
Ground Clearance	(E) 7.3 in (185.4 cm)
Rake/Trail	24° / 3.8 in (96.5 mm)
Weight	
Weight	470 lbs (214 kg)
Gross Vehicle Weight Rating (GVWR)	838 lbs (380 kg)
Maximum Load Capacity (riders, cargo, accessories)	2
Gross Axle Weight Rating (GAWR)	Front: 335 lbs (152 kg) Rear: 503 lbs (228 kg)

EMPULSE TT	
Capacities	
Transmission Oil	1.1 quart (1.0L)
Motor Coolant	1.1 quart (1.0L)
Motor	
Motor Type	Permanent Magnet AC (PMAC)
Peak Power	42 kW
Continuous Power	22 kW
Motor Cooling System	Active Liquid
Chassis	
Front Suspension Type / Travel	Telescopic Fork / 4.7” (119 mm)
Rear Suspension Type/Travel	Fully Adjustable Single Shock
Front Brakes	Dual / 310 mm Floating Rotor / 4 Piston Caliper
Rear Brakes	Single / 220 mm Floating Rotor / 2 Piston Caliper

EMPULSE TT	
Drive System	
Final Drive Type	Chain Drive
Transmission Type	Six Speed / Constant Mesh / Foot Shift
Primary Drive	Gear Drive Wet Clutch
Primary Reduction Ratio	1.686:1
Gear Shift Pattern	2 Down / 4 Up
Internal Gear Ratios	
1st Gear	2.14:1
2nd Gear	1.75:1
3rd Gear	1.45:1
4th Gear	1.23:1
5th Gear	1.04:1
6th Gear (Overdrive)	0.95:1
Final Drive Ratio	2.71:1
Clutch Type	Wet, Multi-Plate
Wheels and Tires	
Front Wheel Type / Size	Cast / 17” x 3.5”
Rear Wheel Type / Size	Cast / 17” x 4.5”
Front Tire Type / Size	Continental Sport Attack 2 / 120-70 ZR17, 58W
Rear Tire Type / Size	Continental Sport Attack 2 / 160-60 ZR17, 69W

EMPULSE TT	
Electrical	
Fuse, Headlight	15A/32V
Fuse, Brake Lights, Horn / Vehicle Control Unit / Coolant Pump, Cooling Fan / Handlebar Power / Running Lights / Turn Signals	5A/32V
Fuse, Auxiliary Power	10A/32V
Bulb, Headlight	H4 - Halogen 55/60W Bulb
Bulb, Taillight	Non-Serviceable LED
Bulb, Turn Signal	12V R10W Bulb
Light, Indicator and License Plate	12V W5W Bulb
Batteries	
Battery Type	Lithium-ion
Number of Modules	2
Battery Pack Capacity	10.3 kWh (max)
Battery Pack Voltage	104 Vdc
Battery Life	1,500 Cycles to 80% Capacity (100% DOD)
Recharge Time	Level I Maximum Charging Time: 9.5 Hours. (0-99% SoC, No Cell Imbalances) Level II Maximum Charging Time: 4.25 Hours. (0-99% SoC, No Cell Imbalances)

IDENTIFICATION NUMBERS

IDENTIFICATION NUMBERS RECORD

Record important identification numbers below.

Vehicle Identification Number:	
key Number:	
Model Number:	

MAINTENANCE RECORD

SERVICE PERFORMED	MILES (KM)	DATE	PERFORMED BY

A

B

C

D

E

F

G

H

I

K

L

M

O

P

R

S

T

W

To locate your nearest dealer,
call 1-877-737-7172
or visit www.victorymotorcycles.com

Victory Motorcycles
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