

# IDAHO

## MOTORCYCLE RIDER'S HANDBOOK



JULY 2024

The Idaho Motorcycle Rider's Manual paraphrases the language of Idaho Statutes. Courts go by the actual language of the statutes, not this text.



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# PREFACE

Riding a motorcycle can be safe and fun when the rider becomes more knowledgeable and skilled.

This manual, even though designed mostly for the novice rider, can educate all motorcycle riders about safe riding habits and strategies to recognize and avoid, or safely manage, potential riding hazards to avoid accidents.

The Idaho Transportation Department used information provided by the Motorcycle Safety Foundation (MSF) and Idaho **STAR** to compile the *Idaho Motorcycle Rider's Manual*, knowledge and skills tests.

Enhanced licensing requirements along with quality motorcycle rider education and increased public awareness have the potential to reduce the number and severity of motorcycle crashes.

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# FEES

(All fees are non-refundable)

Motorcycle riders will be required to pay one or more of the following fees in addition to the cost of the regular driver's license:

Motorcycle "M" Endorsement: ..... \$15.00  
(one-time fee)

Motorcycle Instruction Permit: ..... \$15.00  
(valid for 180 days)

Motorcycle Skills Test: ..... \$25.00  
(paid to examiner)

Motorcycle Knowledge Test: ..... \$5.00  
(paid to the county)



# MOTORCYCLE ENDORSEMENT REQUIREMENTS

Motorized vehicles driven on public highways require a valid driver's license and proof of liability insurance. Certain motorcycles ridden on public highways also require a motorcycle endorsement on the driver's license. The following information can be used to determine if the vehicle being ridden is a motorcycle, motor-driven cycle or motorbike that requires a motorcycle endorsement on the driver's license.

## DEFINITIONS AND REQUIREMENTS

**“Motorcycle” [49-114(11)]** – Motorcycle means every motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground, or two wheels in contact with the ground which is modified by the addition of two stabilizing wheels on the rear of the motorcycle, that meets the federal motor vehicle safety standards (FMVSS) as originally designed, and includes a converted motorbike, but does not include a motor-driven cycle, a motorbike, a tractor or a moped. Motorcycles require a motorcycle endorsement. (See requirements on page 10).

**“Motor-Driven Cycle” [49-114(13)]** – Motor-driven cycle means a cycle with a motor that produces 5 brake horsepower or less as originally manufactured that meets federal motor vehicle safety standards as originally designed, and does not include mopeds. Such vehicles shall be titled and have a motorcycle endorsement. (See requirements on page 11).

**“Motor Scooter and Scooter”** – A motor scooter is a light, 2-wheeled cycle designed with the driver's seat over an enclosed engine and with an open, step through frame and a floorboard for the driver's feet to rest. It is treated as a

motorcycle or motor-driven cycle when meeting FMVSS. If it has this design but does not meet FMVSS, it can be considered a moped or motorbike if it meets the definition or it may otherwise be regarded as a motorized toy. (See requirements on page 12).

**“Motor Bike”** – For a motorbike > 50 cc’s ( designed for or capable of traveling off developed highways; doesn’t meet FMVSS.1) or a motorbike < 50 cc’s ( designed for or capable of traveling off developed highways; doesn’t meet FMVSS.1) see number 3 under footnotes to determine if a motorcycle endorsement is required or not.

**Code 49-114 (9)(2)** qualifies that any scooter or motorcycle (regardless of cc size) that can travel in excess of 30mph is “not a moped” and thus considered a “motorcycle”.

## MOTORCYCLE

**Vehicle Type** Motorcycle (Either internal combustion or electric motor meets FMVSS.,)

**Registration Plates** Regular highway/plates; or restricted vehicle registration/plates; or Off-highway vehicle (OHV) registration sticker only.

**Operation is Allowed** With regular highway registration/plates: All highways including state, U.S. and interstate, etc., except roads that require OHV registration sticker.



With restricted vehicle registration/plates: 1) county, city and highway district roads not closed to OHV use, and non-full-access controlled state highways within city limits and within one mile of city limits with a speed limit of 45 mph or less open to OHV use (check with local jurisdiction for roads closed to OHV use); and 2) Idaho Dept. of Land, BLM, U.S. Forest Service, and private roads open to OHV use (contact the land owner or manager for information on roads open to OHV use), and off-highway on a designated trail, open riding area, or motocross track<sub>2</sub>.

With OHV registration sticker:  
(see #2 listed above.)

### What is Required?

Title	Driver's License	Motorcycle Endorsement	Insurance
Yes!	Yes!	Yes!	Yes!

## MOTOR DRIVEN CYCLE

**Vehicle Type** Motor-driven cycle (Either internal combustion motor, < 5 hp or electric < 3,729 watts and meets FMVSS.<sub>1</sub> Includes dual-sport.)

**Registration Plates** Regular highway/plates; or restricted vehicle registration/plates; or Off-highway vehicle (OHV) registration sticker only.

**Operation is Allowed** With regular highway registration/plates:  
All highways including state, U.S. and interstate, etc., except roads that require an OHV registration sticker.



With restricted vehicle registration/plates:  
1) county, city and highway district roads not closed to OHV use, and non-full-access controlled state highways within city limits and within one mile of city limits with a speed limit of 45 mph or less open to OHV use (check with local jurisdiction for roads closed to OHV use); and 2) Idaho Dept. of Land, BLM, U.S. Forest Service, and private roads open to OHV use (contact the land owner or manager for information on roads open to OHV use), and off-highway on a designated trail, open riding area, or motocross track<sub>3</sub>.

With OHV registration sticker:  
(see #2 listed above.)

### What is Required?

Title	Driver's License	Motorcycle Endorsement	Insurance
Yes!	Yes!	Yes!	Yes!

## MOTORSCOOTER

**Vehicle Type** Motor Scooter (Fits within motorcycle or motor-driven cycle definition but has a step-through design. (Either internal combustion or electric motor meets FMVSS.<sub>1</sub> Includes dual-sport.)

**Registration Plates** Regular highway/plates; or restricted vehicle registration/plates; or Off-highway vehicle (OHV) registration sticker only.

**Operation is Allowed** With regular highway registration/plates:  
All highways including state, U.S. and interstate, etc., except roads that require an OHV registration sticker.



With restricted vehicle registration/plates:  
1) county, city and highway district roads not closed to OHV use, and non-full-access controlled state highways within city limits and within one mile of city limits with a speed limit of 45 mph or less open to OHV use (check with local jurisdiction for roads closed to OHV use); and 2) Idaho Dept. of Land, BLM, U.S. Forest Service, and private roads open to OHV use (contact the land owner or manager for information on roads open to OHV use), and off-highway on a designated trail, open riding area, or motocross track.<sub>2</sub>

With OHV registration sticker:  
(see #2 listed above.)

### What is Required?

Title	Driver's License	Motorcycle Endorsement	Insurance
Yes!	Yes!	Yes!	Yes!

## Footnotes

<sup>1</sup>-FMVSS—Federal Motor Vehicle Safety Standards—those safety standards established by the National Highway Traffic Safety Administration, under title 49 CFR part 500-599, for the safe construction and manufacturing of self-propelled motorized vehicles riding on public highways.

<sup>2</sup>-For additional rider and vehicle equipment requirements for off-highway use, see the Idaho Department of Parks and Recreation website at [parksandrecreation.idaho.gov/activities/atv-motorbike](https://parksandrecreation.idaho.gov/activities/atv-motorbike).

<sup>3</sup>-The rider of a dual-purpose motorbike that meets FMVSS for motorcycles must have a motorcycle endorsement if riding on highways. These motorbikes are treated like motorcycles for the purposes of this document and can receive regular highway registration and plates. A motorbike that has been equipped for highway use and meets FMVSS found in 49 CFR Part 574 as well as equipment requirements of Title 49, Chapter 9, Idaho Code may be self-certified to be a motorcycle by the owner (see ITD form 3018 Motorcycle to Motorcycle Conversion Self Certification Affidavit at [dmv.idaho.gov](https://dmv.idaho.gov)). If a motorbike has been self-certified as a motorcycle, the rider must have a motorcycle endorsement on the driver's license. Local law enforcement may require riders of other motorbikes to have a motorcycle endorsement when used on highways.

# APPLYING FOR A MOTORCYCLE ENDORSEMENT

Being a responsible motorcycle rider can be safe and fun. It requires additional skills and a heightened sense of awareness about other highway users, traffic, and environmental conditions. Responsible riders manage potential problems and avoid dangerous situations.

This manual will help riders learn how to safely ride and handle a motorcycle along with how to pass the knowledge and skills tests. Experience makes for a better and safer motorcyclist.

An experienced and responsible motorcyclist may be a good mentor for teaching new riders how to handle today's traffic, environmental conditions, and scenic winding highways. However, there is no substitute for the mental awareness and physical skills required to safely ride.

Objectively assessing motorcycle riding skills and knowledge is difficult at best, and it is even harder for friends and relatives to be completely honest about their own skills. Taking a knowledge test is the best way to determine if a potential rider has the minimum knowledge necessary to safely ride a motorcycle on the highway.

All riders are encouraged (or required if under 21) to attend an entry-level motorcycle education course which provides knowledge and hands-on training before receiving an endorsement.

The knowledge test questions are based on information, best practices, and concepts found in this manual. In order to pass the knowledge test, the motorcycle rider must know and understand highway rules, safe skills, and abilities. Skills tests are conducted in a controlled, off-street area, by third party Skills Test Examiners.

## **RIDING REQUIREMENTS**

To ride a motorcycle in Idaho, a valid driver's license (Class A, B, C or D) and a motorcycle endorsement (M) on that driver's license are required. A motorcycle instruction permit can be temporarily used for riding prior to obtaining an endorsement.

Anyone wanting to ride a motorcycle must apply for an M endorsement. If you are renewing a driver's license with an M endorsement that has been expired for 25 months or longer, you will be required to pass both the motorcycle knowledge and skills tests. If you are surrendering an out-of-state driver's license with an M endorsement (expired 25 months or longer), you are required to pass a motorcycle knowledge and skills test. Anyone under 21 years of age will be required to take the knowledge test and successfully complete an approved motorcycle rider training course. It is recommended that everyone take a motorcycle rider training course even if they are 21 years of age or older.

## **INSTRUCTION PERMIT**

A motorcycle instruction permit is available to anyone who holds a valid Idaho driver's license. This permit is valid for 180 days and allows motorcyclists to practice riding with the following restrictions:

- Daylight riding only
- No freeway riding
- No passengers

Everyone must pass the written motorcycle knowledge test before applying for an instruction permit. If you take the skills tests while the instruction permit is valid, the fee will be waived when you add the M endorsement to your Idaho driver's license. The permit may be renewed once without requiring the permit holder to retake and pass the knowledge test, provided the previous knowledge test was taken within the past 12 months.



## KNOWLEDGE TEST

The motorcycle knowledge test can be taken at any county driver's license office. The fee for the test is \$5.00. The test questions are based on information and concepts found in this handbook. To pass the test, the motorcyclist must know and understand highway rules and safe riding skills. Failing the test will require a waiting period of 3 days before retesting and repaying the \$5.00 fee.

## SKILLS TEST

The motorcycle skills test is conducted by a third-party Skills Test Examiner in a controlled off-street area. A list of motorcycle Skills Test Examiners can be obtained online at: [dmv.idaho.gov](http://dmv.idaho.gov).

- Select the "Driver's License/ ID Cards" tab.
- Scroll down and select "Skills Test".
- Select the District you live in.
- Find a Motorcycle Skills Test Examiner for your area.
- Call them and set up an appointment to take the Skills Test.

Failing a skills test will require a waiting period of 3 days before retesting and repaying the \$25.00 fee.

## RIDER TRAINING COURSE

Successful completion of an approved motorcycle rider training course will waive the requirement to take the motorcycle skills test if the endorsement is obtained within 25 months of taking the training course.

# PREPARING TO RIDE

## RIDING ENVIRONMENT

The diagram below shows the complex motorcycle riding environment and supports the concept that safe riding depends as much on the mental skills of awareness and judgment as it does on the physical riding skill. Riding a motorcycle is much more involved than driving an automobile. It requires a sense of balance and heightened sense of the environment around the motorcycle rider. A motorcycle responds more quickly to rider input than an automobile and is more sensitive to outside forces like highway surfaces and wind. Motorcycles are also less visible due to their narrower profile, fewer and smaller lights, and reduced contrast with the background. Riders are less protected due to exposure to traffic and other elements.

What a motorcycle rider does before starting a motorcycle ride goes a long way toward determining whether or not they will get to their destination safely.



Before taking off on any motorcycle ride, a safe and responsible rider makes it a point to:

- Wear the proper riding gear.
- Understand their own abilities and limitations.
- Know their motorcycle and conduct a safety inspection.
- Be aware of the riding conditions (weather, traffic, etc.).
- Be a responsible rider.

## **RIDING GEAR**

When riding a motorcycle, the gear is “right” if it provides you comfort, protection, and visibility. In any crash, there is a far better chance of avoiding serious injury if wearing:

- A U.S. Department of Transportation (DOT) compliant helmet
- Face and/or eye protection
- Protective clothing, gloves, and sturdy footwear

## **HELMET USE**

Crashes occur particularly among untrained and/or beginner motorcycle riders. Head injuries can be just as severe as neck injuries, and are more common. Accident analysis shows that head injuries account for a majority of serious and fatal injuries to motorcyclists. Research shows that, with few exceptions, head and neck injuries are reduced by properly wearing a DOT-compliant helmet. Idaho law requires all persons under the age of 18 to wear a DOT-compliant protective helmet while riding on a motorcycle or ATV on or off highway.

Some motorcycle riders do not wear helmets because they think helmets will limit their view to the sides. Others wear helmets only on long motorcycle rides, when riding at high speeds, or where it is required by law. Consider the following:

- A DOT-compliant helmet lets a motorcycle rider see as far to the sides as necessary. A study of more than 900 motorcycle crashes, where 40% of the motorcycle riders

wore helmets, did not find even one case in which a helmet kept a motorcycle rider from spotting danger.

- Most crashes happen on short motorcycle rides (less than five miles long), just a few minutes after starting the ride.
- Most motorcycle crashes occur at less than 30 mph. At these speeds, helmets can cut both the number and the severity of head injuries by half.

No matter what the speed, helmeted motorcycle riders are three times more likely to survive head injuries than those not wearing helmets at the time of the crash. The single most important thing to improve the chances of surviving a crash is to wear a securely-fastened, DOT-compliant helmet.

## HELMET SELECTION

There are three primary types of helmets, providing three different levels of coverage: Half, Three-quarter, Full-face.



Whichever style you choose, get the most protection by making sure the helmet:

- Meets U.S. Department of Transportation (DOT) standards. Helmets with labels from the Snell Memorial Foundation and Economic Commission for Europe (ECE) also give an assurance of quality.
- Fits snugly, all the way around.
- Has no obvious defects such as cracks, loose padding, or frayed straps.

Keep your helmet securely fastened on your head when riding the motorcycle. If a crash occurs, the helmet will be less likely to come off before it gets a chance to protect you.

## EYE AND FACE PROTECTION

A plastic shatter-resistant face shield can help protect your whole face in a crash. It also protects your face from wind, dust, dirt, rain, insects, and pebbles projected from vehicles ahead of the motorcycle. These can be distracting and painful. Wearing a face shield may help prevent a crash, and it gives the most eye and face protection while riding a motorcycle.

Goggles protect the eyes, though they won't protect the rest of your face like a face shield does. A windshield is not a substitute for a face shield or goggles. Most windshields will not protect the eyes from the wind. Neither will eyeglasses or sunglasses. Glasses won't keep your eyes from watering, and they may blow off when you turn your head.

To be effective, eye or face protection must:

- Be free of scratches.
- Be resistant to penetration.
- Be shatter-resistant.
- Give a clear view to either side.
- Fasten securely so they don't blow off.
- Permit air to pass through to reduce fogging.
- Fit in the helmet if needed.



Tinted eye protection should not be worn at night or any other time when little light is available.

## CLOTHING

The right clothing protects the motorcycle rider in a crash and makes them more visible to others. It also provides comfort, as well as protection from heat, cold, debris, and hot and moving parts of the motorcycle.

- **Jacket and pants** should cover your arms and legs completely and fit snug enough to keep from flapping in the wind, yet loose enough to move freely. Leather is

very popular and offers good protection. Sturdy synthetic material provides a lot of protection as well. Wear a mesh or vented jacket even in warm weather to prevent sunburn and dehydration. Many motorcycle riders also choose jackets and pants with rigid body armor inserts in critical areas such as shoulders, elbows, and knees for additional protection.

- **Boots or shoes** should be high and sturdy enough to cover your ankles and give them support. Soles should be made of hard, durable, slip-resistant material. Choose boots or shoes with short heels so they do not catch on rough surfaces. Tuck laces in so they will not catch on the motorcycle.
- **Gloves** provide a better grip and protect your hands from the elements and from abrasion in a crash. Gloves should be made of leather or similar durable material. Full-fingered gloves provide the most protection.
- **Hearing protection** tests show that earplugs help reduce sound levels by 30 decibels and prevent hearing loss. Roaring engines and the wind in your face are exhilarating, but sustained exposure, even in a good-fitting helmet, results in hearing loss.

Keeping you warm, dry, and protected during cold and/or wet weather should be a primary consideration when choosing riding gear. Controlling a motorcycle is difficult if you are numb from the cold. Riding a motorcycle for long periods in cold weather can cause severe chill and fatigue. A winter jacket should resist wind while fitting snugly at the neck, wrists, and waist. Good-quality rain suits designed for motorcycle riding resist tearing apart or ballooning up at higher speeds.

# EXPOSED OR PROTECTED

EXPOSED

OR

PROTECTED



CHOICES HAVE CONSEQUENCES

## KNOW THE MOTORCYCLE

There are plenty of hazards on roadways that can cause problems while riding a motorcycle. The motorcycle itself should not be one of them. To ensure your motorcycle will not break down, follow these guidelines.

- Choose a motorcycle that fits you and is easily controllable.
- Choose a motorcycle that is suited for the usual type of riding you do—commuting, touring, off-road, etc.
- Read and familiarize yourself with your motorcycle's specific owner's manual.
- Become familiar with your specific motorcycle's controls.
- Perform a precheck of the motorcycle before each and every ride.
- Ensure regular maintenance is performed.
- Avoid add-ons and modifications that make it harder to ride the motorcycle.

## THE RIGHT MOTORCYCLE

Make sure the motorcycle fits and is comfortable to ride. Your feet should reach the ground while seated and the controls should be easy to operate. Smaller motorcycles may be easier for beginner motorcyclists to ride.

## REQUIRED EQUIPMENT

Idaho Code requires all motorcycles ridden on Idaho highways to have the following:

- **Brakes** – On at least one wheel and be operated by hand or foot.
- **Fenders** – Must have fenders on both wheels that extend in full width from a point above and forward of the center of the tire to the rear of the wheel to a point not more than 20 inches above the surface of the highway.
- **Passenger Seat** – Must not carry a passenger unless



a permanently attached seat is provided and the motorcycle is designed to carry more than one person.

- **Headlight** – A headlight sufficient to reveal a person or vehicle not less than 100 feet ahead when traveling less than 25 mph, not less than 200 feet when traveling 25-34 mph, and not less than 300 feet when traveling 35 mph or more.
- **Helmet** – Any person under the age of 18 must wear a protective helmet while riding a motorcycle or ATV, on or off road.
- **Horn** – Must have a horn that can be heard not less than 200 feet away.
- **Insurance** – Must have (and carry) liability insurance. \$25,000 bodily injury to or death on 1 person in 1 accident, \$50,000 bodily injury to or death of 2 or more persons in any 1 accident and \$15,000 injury or destruction of property of others in any 1 accident.
- **Mirror** – A mirror that provides a view of the highway for at least 200 feet to the rear.
- **Muffler** – Not modified to increase the noise above that emitted by the muffler originally installed by the manufacturer.
- **Brake Light** – At least one red or amber light visible from a minimum of 100 feet to the rear in normal sunlight and actuated when using the brakes.
- **Taillight** – One red taillight visible from a minimum of 500 feet to the rear.
- **Reflector** – At least one rear reflector.
- **Turn Signals** – Two white or amber lights visible from a minimum of 100 feet to the front and two red or amber lights visible from a minimum of 100 feet to the rear in normal sunlight.
- **Footrests** – May not carry a passenger unless it is equipped with footrests designed exclusively for the use of a passenger.

# MOTORCYCLE PARTS



Motorcycle: Honda CB600F

## BECOMING FAMILIAR WITH THE MOTORCYCLE CONTROLS

The rider should be completely familiar with the motorcycle before riding on the street, especially if borrowing a motorcycle.

- Read and follow the owner's manual.
- Do all required safety checks.
- Locate where everything is, particularly the turn signals, horn, headlight switch, fuel-supply valve, and engine cut-off switch. Learn to operate these items without having to look for them.
- Know the gear pattern. Practice using the throttle, clutch, and brakes before beginning your ride. All motorcycle controls react a little differently.
- Ride very cautiously. Accelerate gently, take turns more slowly, and leave extra room for stopping.

## CHECKING THE MOTORCYCLE

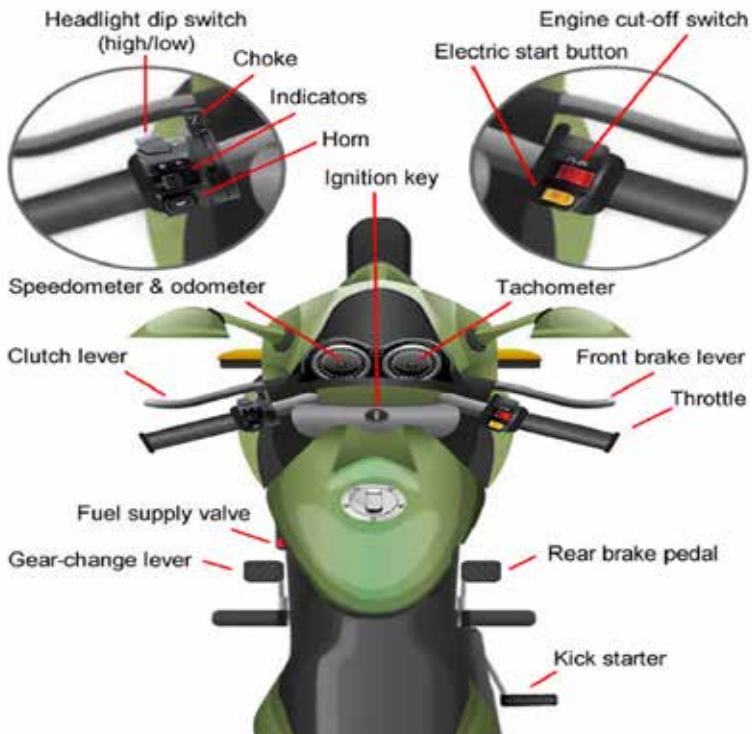
A motorcycle needs more frequent maintenance than an automobile. A minor technical failure in an automobile seldom leads to anything more than an inconvenience for the driver. The same failure on a motorcycle may result in having to leave the motorcycle parked on the side of the highway, or worse, a crash. If something is wrong with the motorcycle figure it out before getting into traffic. Complete a thorough precheck of the motorcycle before every ride.

- **Tires** – Check the air pressure, general wear, and tread.
- **Fluids** – Oil and fluid levels. At a minimum, check the oil, hydraulic fluids, and coolants weekly. Look under the motorcycle for signs of fluid leaks.
- **Headlights and Taillight** – Check them both. Test the switch to make sure both high and low beams are working.
- **Turn Signals** – Turn on both right and left turn signals. Make sure all four lights are working properly.

- **Brake Light** – Try both brake controls and make sure each one activates the brake light.

Once you are sitting on the motorcycle, you should complete the following checks before riding:

- **Clutch and Throttle** – Make sure they work smoothly. The throttle should snap back to the idle position when it is released. The clutch should operate smoothly without excessive tightness or free-play.
- **Mirrors** – Clean and adjust all mirrors before starting. It's difficult and unsafe to ride one handed while trying to adjust a mirror. Each mirror should be adjusted so that you can see the lane behind and as much of the lane next to the motorcycle as possible. When properly adjusted, a mirror may show the edge of your arm or shoulder—but most important is seeing the highway behind and to the side of the motorcycle.



- **Brakes** – Check the front and rear brake levers one at a time to make sure each one firmly holds the motorcycle in place when fully applied.
- **Horn** – Check the horn.
- **Fuel Supply Valve (if equipped\*)** – If the valve is closed, the motorcycle may start due to the fuel remaining in the lines but will stall after the lines are emptied. \*Many newer models are fuel-injected and do not have a fuel supply valve. Check the owner’s manual for equipment on your motorcycle.

Also check wheels, cables, and fasteners.

## **BORROWING AND LENDING**

Whether you are borrowing or lending a motorcycle, be aware that crashes are fairly common among beginner motorcyclists—especially in the first months of riding. Riding an unfamiliar motorcycle adds to the problem. If borrowing a motorcycle, get familiar with it in a controlled area and make sure it is insured. If lending a motorcycle to friends, make sure they are licensed and know how to ride a motorcycle before allowing them out into traffic.

No matter how experienced you may be, ride extra carefully on any motorcycle that’s new or unfamiliar. More than half of all crashes occur on motorcycles that have been ridden by the rider for less than six months. It takes time to adjust, so a beginner motorcyclist needs a greater margin for errors when starting to ride.

## **KNOW YOUR RESPONSIBILITIES**

“Accident” implies an unforeseen event that occurs without anyone’s fault or negligence. In fact, most people involved in a crash can usually claim some responsibility for what takes place.

Someone tries to slip through an intersection on a yellow light that is turning red; the light turns green and the motorcycle rider pulls into the intersection without checking for possible latecomers. It was the other driver's responsibility to stop and the motorcycle rider's responsibility to look before proceeding.

Even when someone else is the first to start the chain of events leading to a crash, it does not leave either party free of their own responsibility.

Motorcycle riders cannot ensure that all drivers will see them or yield the right-of-way. To lessen the chances of a crash:

- Be visible – wear bright-colored clothing and/or gear that has retro-reflective material, use the headlight (set on low during daylight hours), and ride the motorcycle in the best lane position to see and be seen.
- Communicate your intentions – use the proper signals, brake light, and lane position.
- Maintain an adequate space cushion – allow extra space when following, being followed, passing, and being passed.
- Scan – the path of travel ahead.
- Identify and separate – hazards in the path of travel.
- Be prepared to act – remain alert and know how to use proper crash avoidance skills. There is rarely a single cause to a crash. The ability to ride a motorcycle while remaining alert to possible hazards, the ability to make critical decisions and initiate those decisions, separates responsible operators from the rest.

To keep from being the cause of an accident or an unwilling participant in a crash should be one of your primary goals.

# RIDER ABILITIES

A manual cannot teach a motorcycle rider how to control direction, speed, or balance. That is something only learned through practice. Rider training offers a motorcycle rider the best success in mastering control by learning and practicing the necessary skills in a safe environment. Control is demonstrated by knowing your riding abilities, using them, and obeying the rules of the road.

Consider taking a rider training course, even if you have ridden before. Training not only includes basic control, but it also covers mental strategies and hazard avoidance skills.

## BASIC VEHICLE CONTROL

### BODY POSITION

**Seat** – Sit forward in the saddle so that your arms are slightly bent when holding the handgrips. This allows you to press on the handlebars without having to stretch, resulting in better steering control.

**Hands** – Hold the handgrips firmly, especially over rough surfaces. Proper hand position is vital to the safe operation of your motorcycle. Improper hand position can lead to accidentally applying too much throttle. Also, response time for hand braking can be slowed by the need to reposition your hands, especially if needing to reach for the brake suddenly. Also, adjust the handlebars so your hands are even with or below your elbows.



CORRECT



INCORRECT

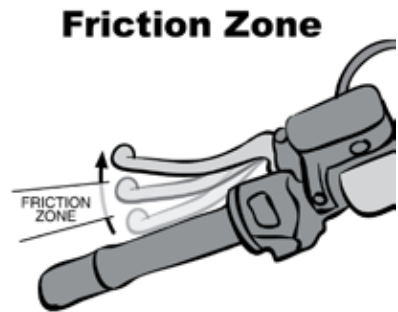
**Knees** – Keep your knees against the gas tank to help keep the motorcycle balanced and upright.

**Feet** – Keep your feet firmly on the footrests to maintain balance. Don't drag your feet. If a foot catches on something, you can be injured, and it could affect the control of the motorcycle. Keep your feet near the controls so you can get to them quickly if needed.

## GETTING UNDERWAY

Once the motorcycle is running, to smoothly start moving forward, squeeze the clutch and shift into first gear. Use the friction zone—the area of clutch travel where the engine's power begins to transmit to the rear wheel. This partial engagement allows you to smoothly and precisely control engine power to the rear wheel.

Take your time easing out the clutch. Let the motorcycle get underway before fully releasing the clutch.



## SHIFTING GEARS

There is more to shifting gears than simply getting the motorcycle to pick up speed smoothly. Learn to use the gears correctly when downshifting or starting on hills. This is important for safe motorcycle riding.

The gearshift lever is located in front of the left footrest and is operated with the left foot. To shift up to a higher gear, position your toe under the shift lever and lift. To downshift, press the shift lever down. The shift lever changes one gear each time it is lifted or pressed down. Whenever the lever is released, spring loading returns it to center where the mechanism resets for the next shift.



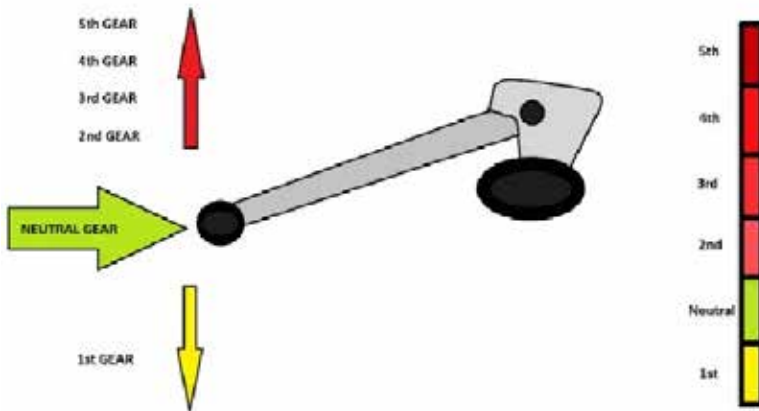
A typical gear pattern is 1-N-2-3-4-5. The N is for neutral, which is selected by either a “half lift” from first gear or a “half press” from second gear. Most motorcycles have five gears, but some have four or six gears.

**Upshifting** – As the motorcycle increases speed, you will need to shift up to a higher gear. Shift up well before the engine reaches its maximum recommended RPM or redline. As a general rule, shift up in time to avoid over-revving the engine, but not so soon as to cause the engine to drag.

**When upshifting, use a 3-step process:**

1. Roll off the throttle and squeeze the clutch lever.
2. Lift the shift lever firmly as far as it will go.
3. Smoothly ease out the clutch and roll on the throttle.

Once the shift is completed, release the shift lever to permit it to reset for the next shift.



**Downshifting** – You can shift down through the gears with the clutch in as the motorcycle slows or stops. You can also downshift for more power to accelerate.

Make certain the motorcycle is going slow enough when shifting into a lower gear. If not, the motorcycle will lurch, and the rear wheel may skid. When riding downhill or shifting into first gear, you may need to use the brakes to slow enough before downshifting safely.

**When downshifting, use a 3-step process:**

- 1. Roll off the throttle as you squeeze the clutch lever.**
- 2. Press the shift lever down firmly.**
- 3. Ease out the clutch lever as you roll on the throttle.**

Once the shift is completed, release the shift lever to permit it to reset for the next shift. When downshifting, you want to release the clutch more slowly and smoothly to prevent jerking or chirping the rear tire. Rolling on the throttle slightly while smoothly easing out the clutch can help the engine come up to speed more quickly and also make the downshift smoother.

Shifting to a lower gear causes an effect similar to using the brakes. This is known as engine braking. To use engine braking, shift down one gear at a time and ease out the clutch through the friction zone between each downshift. Keep the clutch in the friction zone until the engine speed stabilizes. Then ease out the lever fully until ready for the next downshift. It is best to shift gears one at a time, but it is possible to shift through more than one gear while you keep squeezing the clutch.

Remain in first gear while stopped so that you can move the motorcycle quickly if needed.

Work toward a smooth clutch release, especially when downshifting. It is best to change gears before entering a turn. However, sometimes shifting while in the turn is necessary. If so, remember to do so smoothly. A sudden change in power to the rear wheel can cause a skid or upset the suspension.

## BRAKING

Improper braking technique remains a significant contributing factor in many motorcycle crashes. Most motorcycles have two brake controls: one for the front wheel and one for the rear wheel. Always use both brakes every time you slow or stop. The front brake is more powerful and can provide at least 70% of the total stopping power. The front brake is safe to use if applied properly. Maximum straight-line braking is accomplished by fully applying both front and rear brakes without locking either wheel.

### To do this:

- **Squeeze the front brake** smoothly, firmly, and with increasing pressure. Do not grab the brake lever or use abrupt pressure. As the motorcycle's weight transfers forward, more traction becomes available for the front wheel, so the front brake can be applied more after braking begins.
- **Keep your knees against the tank and your eyes up**, looking well ahead. This helps balance the motorcycle for stopping in a straight line.
- **Apply less pressure to the rear brake pedal** to prevent a rear wheel skid. As weight transfers forward, less traction is available at the rear. Use less and less rear brake pressure. Using both brakes for even, "normal" stops will permit you to develop the proper habits and skills in case of emergency. Grabbing at the front brake or jamming down on the rear can cause the brakes to lock, resulting in significant control problems.

## STOPPING IN A CURVE

Any time a motorcycle is leaned over in a turn, the amount of traction available for braking is reduced. The greater the lean angle, the more the possibility of the tires losing traction. To stop as quickly and as safely as possible in a curve, and depending on road and traffic conditions, try to get the

motorcycle as perpendicular to the highway as possible, then brake. This maneuver may take the motorcycle out of the lane.

If conditions do not allow straight-line braking, brake smoothly and gradually, and as the motorcycle straightens, gradually increase brake pressure. As the lean angle is reduced by straightening, more traction for braking becomes available. By the time the motorcycle is straight up and the handlebars are square, you can apply maximum braking pressure.

## **LINKED AND INTEGRATED BRAKING SYSTEMS**

Some motorcycles have linked braking, which connects the front and rear brakes on the motorcycle; it means the brakes are linked together in some way. For example, when you apply the rear brake, the system automatically applies a proportional amount of pressure on the front brake. An integrated braking system is a variation of the linked system in which partial front braking is applied whenever the rear brake is activated. There are a variety of types of braking systems, so consult your owner's manual for a detailed explanation on the operation and effective use of these systems.

## **ANTI-LOCK BRAKING SYSTEMS (ABS)**

The benefit of ABS cannot be overstated. This technology prevents wheel-lockup during straight-line stops, and on some recent models, it even works when in a leaning position. It is important to know if your motorcycle is equipped with ABS and how it works on your bike. Check the owner's manual for information about your motorcycle's brake system.

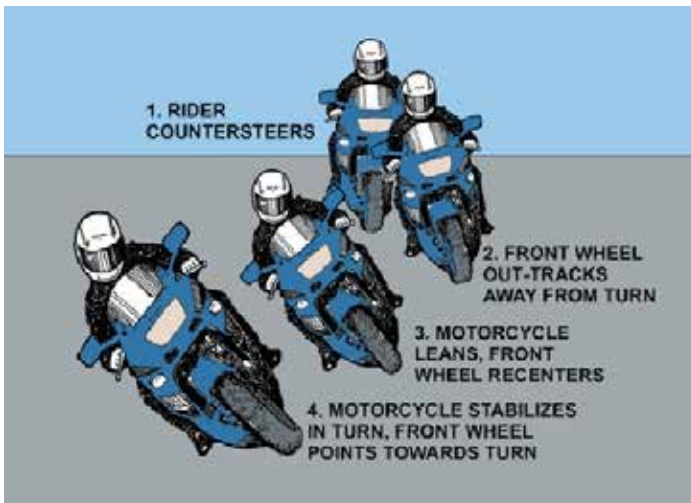
To use, apply maximum pressure on both the front and rear brake. ABS is activated when electronic sensors detect a wheel lock-up (a skid). ABS systems are capable of releasing and reapplying brake pressure multiple times per second.

## TURNING

Motorcycle riders often try to take curves or turns too fast. When they cannot hold the turn, they end up crossing into another lane of traffic or going off the highway. They may overreact and brake too hard, causing a skid and loss of control. Approach turns and curves with caution.

### Use these four steps for better control:

- **SLOW** – to reduce speed before the turn by closing the throttle and, if necessary, applying both brakes.
- **LOOK** – through the turn to where you want the motorcycle to go. Turn just your head and eyes, not your shoulders, and keep your eyes level with the horizon.
- **ROLL** – on the throttle through the turn. Maintain steady speed or accelerate gradually. Avoid decelerating in the turn.
- **PRESS** – To turn, the motorcycle must lean. To lean the motorcycle, press on the handgrip in the direction of the turn. Press the left handgrip—lean left—go left. Press the right handgrip—lean right—go right. This is known as counter-steering. The higher the speed in a turn, the greater the lean angle.





In normal turns, the rider and the motorcycle should lean together at the same angle.

In slow, tight turns, counter-balance by leaning the motorcycle and keeping your body straight.



## KEEPING YOUR DISTANCE

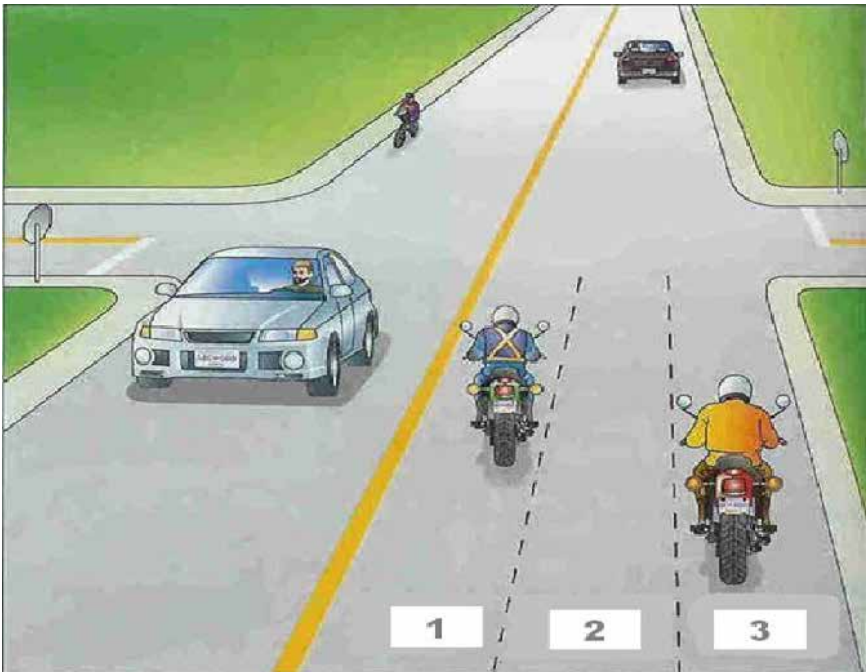
One of the best protections you have is distance—a “space cushion”—separating the motorcycle from other vehicles on the roadway. This will provide a clear view of emerging traffic situations, so that if someone else makes a mistake, you will have more time to respond and more space to maneuver, including an escape route if necessary.

## LANE POSITIONS

Successful motorcyclists know that they are safer when clearly seen. In some ways the size of the motorcycle can work to your advantage. Each traffic lane gives a motorcycle three areas or paths of travel as indicated in the following illustration.

### Your lane position will help to:

- enhance the ability to see and be seen
- provide an escape route
- provide a space cushion
- communicate your intentions
- protect your lane from other vehicle encroachments
- avoid other drivers' blind spots
- avoid surface hazards
- avoid wind blast from other vehicles
- set up for turns



Select the appropriate path to maximize the space cushion and help you be more visible to others on the road. Many motorcyclists consider the left third of the lane—the left tire track of automobiles—to be a default lane position. However, many do vary their lane position as conditions warrant, keeping in mind that no portion of the lane need be avoided—including the center.

Change positions as traffic situations change.

Unless the highway is wet, the center strip (path #2) often permits adequate traction to ride safely. The strip in the center portion of the lane can collect drippings from vehicles but is usually narrow. You can ride to the left or right of a grease strip and still be within the center portion of the traffic lane. Avoid riding on big buildups of oil and grease, usually found at busy intersections or toll booth stops.

## **FOLLOWING ANOTHER VEHICLE**

Following too closely is a factor in crashes. In traffic, motorcycles typically need the same amount of distance as vehicles to stop safely.

Normally, a *minimum* of a three-seconds following distance should be maintained behind the vehicle ahead.

### **To gauge the following distance:**

- 1. Pick out a fixed marker, such as a pavement marking or lamp post on or near the highway ahead.**
- 2. When the rear bumper of the vehicle ahead passes the marker, count off the seconds: “one-thousand-one, one-thousand-two, one-thousand-three.”**
- 3. If you reach the marker before you count to “3,” you are following too closely.**



Typically, this minimum is not enough distance to safely stop. The greater the following distance, the greater the margin of safety, especially when conditions are less than ideal. Your following distance should also permit a better view of potholes and other hazards in your path of travel.

A larger space cushion is needed at higher speeds and anytime the motorcycle will take longer than normal to stop. If the pavement is slippery, you have a limited sight distance, or traffic is heavy, it is wise to allow for a greater following distance.

Keep well behind the vehicle ahead even when stopped. This will make it easier to get out of the way if someone bears down on you from behind. It will also give you a cushion of space if the vehicle ahead starts to back up for some reason.

When riding in the center portion of the lane behind another vehicle, you will appear in the middle of the driver's rearview mirror. Riding in the left third of a lane may permit a driver to see the motorcycle in a side view mirror and helps you see the traffic ahead. But remember that most drivers don't look at their side view mirrors nearly as often as they check the rearview mirror.



While the center portion of the lane may be the best place to be seen by the driver immediately in front of you, be aware that this position can also cause you to “hide” in traffic. Constantly scan your surroundings and adjust your position for maximum visibility and line-of-sight.

Continually remain aware of other vehicles and their blind spots. Avoid traveling in these for extended periods.

## BEING FOLLOWED

Speeding up to lose someone following too closely often ends up with someone tailgating at a higher speed.

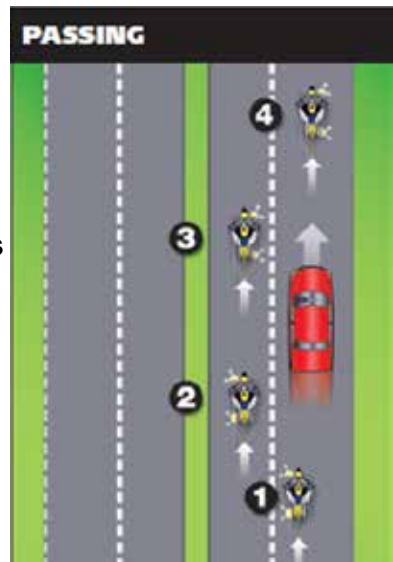
A better way to handle tailgaters is to get them in front of the motorcycle. When someone is following too close, change lanes when possible and let them pass. If you cannot let them pass, then slow down gradually and open up extra space to allow room for both you and the tailgater to stop. If they do not pass, you will have given you and them more time and space to react in case an emergency does develop.

## PASSING & BEING PASSED

Passing and being passed on a motorcycle by other vehicles is not much different than when driving a vehicle. However, visibility is more critical. Be sure other drivers see the motorcycle, and you can see potential hazards.

### Passing

- 1. Ride in the left portion of the lane at a safe following distance to increase your line of sight and make your motorcycle more visible. Signal and check for on-coming traffic. Use the mirrors and turn your head to the left to check for traffic behind.**
- 2. When safe, move into the left lane and then accelerate. Select a lane position that doesn't crowd the vehicle being passed and provides adequate space to avoid**



hazards in the lane of travel.

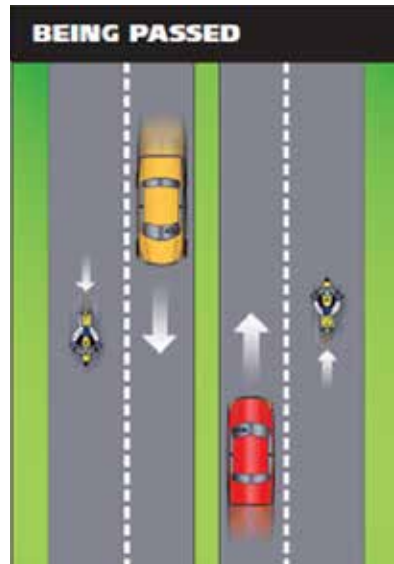
3. Ride through the blind spot quickly.
4. Signal again, complete a mirror and a head check before returning to the original lane, and then cancel your turn signal.

**Passing Speed Limit Exception:** You may exceed the posted speed limit by up to 15 miles per hour while passing another vehicle that is traveling below the posted speed limit on a 2-lane highway. The posted speed limit must be 55 mile per hour or greater. Not allowed in work zones. It is never a good idea to pass on a bridge, blind hill, or any other time your sight distance and escape route is compromised.

## Being Passed

When being passed from behind or by an oncoming vehicle, consider using the center or right portion of the lane to avoid being hit by:

- **The other vehicle** – A slight mistake by you or the passing driver could cause a sideswipe.
- **Extended mirrors** –Some drivers forget that their mirrors hang out farther than their fenders.
- **Objects thrown from windows** – Even if the driver knows the motorcycle is there, a passenger may not see the motorcycle and toss something out that hits you or lands on the highway ahead of you.



- **Blasts of wind from larger vehicles** – Wind can affect control of the motorcycle. You have more room for error in the middle or right portion of your lane when hit by the blast of wind. Riding closer to hazards could put you in a dangerous position.

## PASSING PARKED VEHICLES

When passing parked vehicles, slow down and consider staying toward the left portion of the lane. This can help avoid problems caused by vehicle doors opening, drivers getting out of vehicles, or people stepping from between vehicles. If oncoming traffic is present, it is usually best to remain in the center lane position to maximize the space cushion.

A significant danger to a motorcyclist can occur when a driver pulls away from the curb without checking for traffic behind. Even a driver who does look may fail to see the motorcycle. In either event, the driver might cut into the path of the motorcycle, so slow down or change lanes to make room for this possibility.

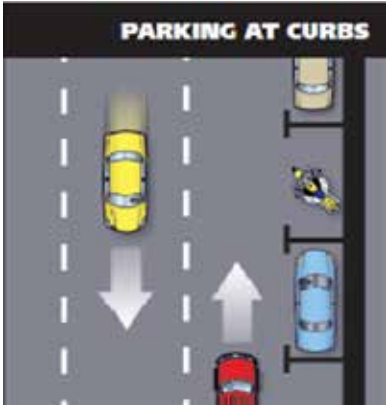


Vehicles making a sudden U-turn are extremely dangerous. They may cut you off entirely by blocking the whole road, leaving no place for you to go. Since you can't anticipate what a driver will do, get the driver's attention. Sound the horn and continue with caution.

## PARKING

Angle the motorcycle to see in both directions without straining or having the motorcycle in the lane of travel. When possible, back into a parking spot to permit riding the motorcycle

forward out into traffic rather than backing out into traffic. Whenever possible, position the motorcycle at an angle with the rear wheel to the curb. (Note: Some cities may have ordinances that require motorcycles to park parallel to the curb.)



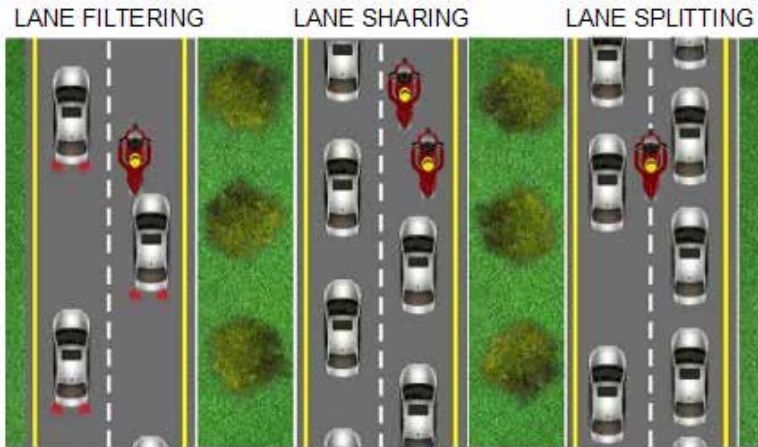
### LANE FILTERING/SHARING/SPLITTING

The practice of “lane filtering” or “splitting” is not legal in the State of Idaho.

**Lane Filtering** - picking your way through slow moving or stationary traffic such as at a stoplight.

**Lane Sharing** - is two riders in the same lane side by side.

**Lane Splitting** - is weaving between moving traffic at a higher speed, usually on the lane dividing line.



Motorcycles need a full lane in order to maintain a space cushion from other vehicles. Lane sharing between other vehicles and motorcycles takes away your space cushion and can leave you without an escape route and vulnerable to a crash. Riding between rows of stopped or moving vehicles can result in a crash due to the unexpected—a hand coming out of a window, a door opening, or a vehicle turning.

Discourage lane sharing by others by positioning yourself where drivers might be tempted to squeeze by the motorcycle. Drivers are most tempted to do this when:

- In heavy, bumper-to-bumper traffic.
- They want to pass.
- You are preparing to turn at an intersection.
- You are moving into an exit lane or leaving the highway.

## MERGING VEHICLES

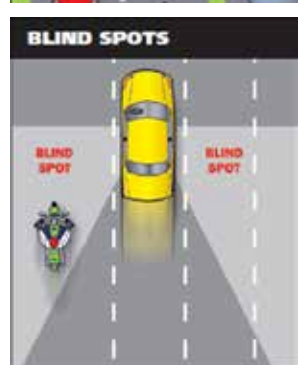
Drivers on an entrance ramp may not see the motorcycle on the highway. Give them plenty of room. Change to another lane if one is open. If there is no room for a lane change, adjust your speed to open up space for the merging driver.



## VEHICLES ALONGSIDE

Do not ride next to vehicles in other lanes if it can be avoided.

The motorcycle might be in the blind spot of a vehicle in the next lane, which could merge into you without warning. Vehicles in the next lane can also block your escape routes. Speed up or fall back to find a place clear of traffic on both sides.



## **MENTAL MOTORCYCLING (S.I.P.D.E)**

Safe motorcycle riders with experience remain aware of what is going on around them. They improve their riding strategy by using a mental strategy for making appropriate judgments to avoid hazards. If you do not already have a sound mental strategy, consider using SIPDE, a strategy taught in many motorcycle rider training courses:

- *Scan*
- *Identify*
- *Predict*
- *Decide*
- *Execute*

### **SCAN**

Search aggressively ahead, behind and to the sides for potential hazards. What you don't detect can hurt you! Scan aggressively to recognize problems before they become critical. Other highway users such as other vehicles, bicyclists, pedestrians and animals can pose hazards to motorcyclists. They may violate your right-of-way, limit sight distance, crash into you, or simply be a distraction.

Focus even more on finding potential escape routes in or around intersections, shopping areas, school zones, and construction zones.

Search for traffic that may turn left in front of you, traffic coming from your left and right, and traffic approaching from behind. Be especially alert in areas with limited visibility. Visually "busy" surroundings could hide the motorcycle from others and put you in a dangerous and/or life-threatening situation.

### **IDENTIFY**

Locate hazards and potential conflicts. Hazards typically fall into the following three categories:

- Other vehicles – may move into your path and increase the risk of a collision.
- Pedestrians, children, and animals –can be unpredictable, making short quick moves and depending on their size, can create an impending hazard.
- Stationary objects – recognizing potholes, guard rails, bridges, highway signs, hedges, tire debris, lumber, or trees in the roadway increases your reaction time and allows for safer maneuvering to avoid these hazards.

## **PREDICT**

Consider the speed, distance, and direction of hazards to anticipate how they may affect you and your motorcycle. Vehicles moving into your path are more critical to your decision making process than those moving away or remaining stationary. Predict where a collision may occur. Continually ask yourself the “what if...?” phrase to evaluate your riding environment.

Predict when, where, and how to act based on types of hazards encountered:

- A single hazard
- Multiple hazards
- Stationary hazards
- Moving hazards

Weigh consequences of each hazard separately, whether single or multiple hazards are involved. Ask this question: “What am I going to do and how am I going to do it?”

## **DECIDE**

The next step in your mental strategy is to make decisions based upon your predictions. Complete your “What if...?” to assess the consequences of the choices—what is the best action to take? How best to do it?



In any situation, a rider has three choices:

- Adjust speed.
- Adjust motorcycle position.
- Communicate presence.

Adjusting your speed and/or position can give you more time and space to react. Slowing is often the best way to decrease risk; however, there may be times when acceleration away from the hazard may be the best option.

Communicating may work, but it is typically not your first line of defense, because it requires the other vehicle operator to see or hear you and then process and interpret the signal you are giving.

## EXECUTE

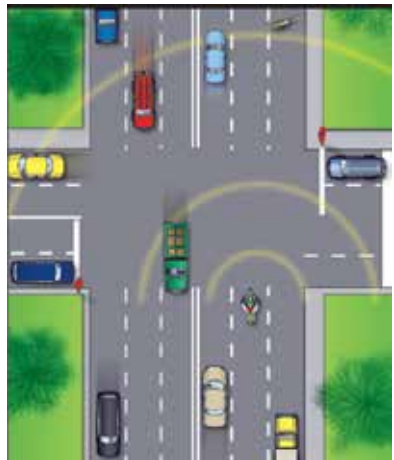
Act upon your choices from the Decide step. Take the appropriate action for the situation.

### **To create more space and minimize harm from hazards:**

- Adjust speed by speeding up, slowing down, or stopping.
- Adjust your position and/or direction—move left or move right.
- Communicate your presence with the horn, brake light, high beam, or turn signals.

In potentially high risk areas, such as intersections, shopping areas, school zones, and construction zones, cover the clutch and both brakes to reduce the time needed to react.

Apply the old adage “one step at a time” to handle two or more hazards. Adjust speed to permit two hazards to separate. Then you can deal with them one at a time as single hazards.



Decision-making becomes more complex with three or more hazards. Weigh the consequences of each and give equal distance to the hazards.

## INTERSECTIONS

The greatest potential for conflict between the you and other traffic is at intersections. An intersection can be in the middle of an urban area or at a driveway on a residential street—anywhere traffic may cross your path of travel.

Many motorcycle vs. vehicle crashes involve a driver entering a motorcycle rider's right-of-way. Vehicles turning left in front of the motorcycle—including vehicles turning left from the lane to your right and vehicles on side streets pulling into your lane—are critical dangers. Using SIPDE at intersections is crucial.

### BLIND INTERSECTIONS

When approaching a blind intersection, move to the portion of the lane that will bring the motorcycle into another driver's field of sight at the earliest possible moment.

In this picture, the motorcycle rider has moved to the left portion of the lane—away from the parked vehicle—so the driver on the cross street can see the motorcycle as soon as possible. **Remember, the key is to see as much as possible and be seen by others while protecting your lane.**



### STOP SIGNS AND SIGNALS

When approaching a stop sign or traffic signal, first come to a stop at the stop line. If your view is blocked, edge forward then

stop again, just short of where the cross-traffic lane meets your lane. From that position, lean forward and look around buildings, parked vehicles, or bushes to see if anything is coming. Make sure your front wheel stays out of the cross lane.

## TRAFFIC CONTROL SIGNALS

Due to their size, motorcycles may not always trigger traffic control signals at an intersection. Idaho Code allows a motorcycle rider, after coming to a complete stop, to proceed with caution through a red light at an intersection.

However, the rider may only do so if the signal fails to operate after waiting through one complete cycle. The rider must yield to any traffic in, or approaching, the intersection.

This law does not provide a defense for violations of traffic laws under Section 49-801, Idaho Code (“Obedience to and required traffic control devices”). Motorcycle riders must still obey traffic signals when the traffic control signal device can be triggered by the size of motorcycle they are operating, or if the intersection in question does not have a signal triggered by a vehicle detection device.



## SEE AND BE SEEN

In crashes with motorcyclists, drivers often say that they never saw the motorcycle. From ahead or behind, a motorcycle's profile is much smaller than a vehicle's. Also, it's hard to see something a driver is not looking for, and most drivers are not intently looking for motorcycles. More likely, they are unintentionally looking past the motorcycle's smaller silhouette in search of larger vehicles that may pose a problem to them.

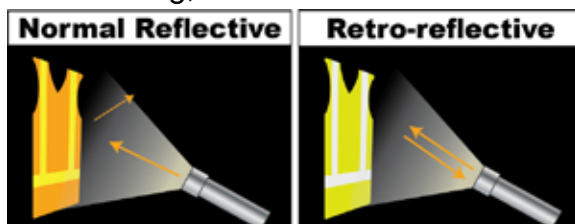
Even if a driver does see you, you are not necessarily safe. Smaller vehicles appear farther away and seem to be traveling slower than they actually are. It is common for drivers to pull out in front of motorcyclists thinking they have plenty of time. Too often, they are wrong.

However, riders can do many things to make it easier for drivers to recognize and see the motorcycle and rider.

### CLOTHING

Many on-road crashes occur in daylight. Remember, the body is half of the visible surface area of the rider/motorcycle unit. Black is hard to see in daytime and invisible at night. Any bright color such as orange, red, yellow, or white is better than dark colors. Bright colors and retro-reflective materials (on your helmet, jacket, or vest) are the best choices for keeping you visible to surrounding traffic both day and night.

There may be times when visibility becomes limited due to nighttime, fog, heavy rainfall, or wind in a dusty area. Remember that if you're having trouble seeing, so are the drivers that share the road with you. Wear bright and retro-reflective gear to make yourself more visible. Retro-



reflective tape, piping, or a retro-reflective vest reflects light back to the source and illuminates the rider, providing additional visual cues to others. This is far more effective than just bright clothing.

Helmets can do more than provide protection in a crash, too. Brightly-colored helmets help others see the motorcycle and rider. Retro-reflective material on the sides of the helmet and clothing will help drivers coming from the side of the motorcycle notice you.

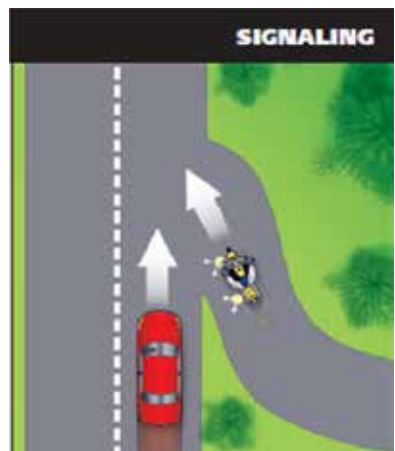
## HEADLIGHT

Another way to help others see you is to keep the headlight on at all times. New motorcycles sold in the USA since 1978 automatically have the headlights on when running. Studies show that, during the day, a motorcycle with its light on is more likely to be noticed. Be sure the headlight is adjusted properly.

## SIGNALS

The turn signals on a motorcycle are similar to those on a vehicle. They tell others what the motorcycle rider plans to do. However, due to a rider's added vulnerability, turn signals are even more important. Use them anytime lane changes are made or when turning. Use them even when no one else seems to be around.

When entering a highway, drivers approaching from behind are more likely to see the motorcycle turn signal blinking and make room for the motorcyclist. Turning the signal light on before each turn reduces confusion and frustration for the traffic around you. Use the turn signals at every turn so drivers can react accordingly. Do not make them guess what you intend to do.



Once the turn is made, make sure the turn signal is off. Drivers may pull directly into your path, thinking you are planning to turn again. Many motorcycle turn signals are not self-canceling. Some take several seconds to turn off. Be in the habit of canceling your signal immediately after you complete a turn or lane change.

## **BRAKE LIGHT**

The motorcycle's brake light is usually not as noticeable as a brake light on a vehicle—particularly when the taillight is on, which goes on with the headlight. Help others notice the motorcycle by flashing the brake light before slowing down. It is especially important to flash the brake light before:

- Slowing more quickly than others expect (turning off a high speed highway).
- Slowing where others may not expect it (in the middle of a block or at an alley).

If being followed too closely, flash the brake light before slowing down. The tailgater may be watching the motorcycle and not see something ahead that is causing you to slow down. This will hopefully discourage them from tailgating and warn them of hazards ahead they may not see.

## **MIRRORS**

While it's most important to keep track of what's happening ahead, motorcycle riders cannot afford to ignore situations behind them. Traffic conditions change quickly. Knowing what is going on behind you can help you make a safe decision about how to handle trouble ahead. Along with using SIPDE, frequent mirror checks should be part of the normal scanning routine.

Make a special point of using the mirrors:

- When stopped at an intersection, watch for vehicles coming up from behind. If the drivers are not paying

attention, they could be on top of you before they see you.

- Before changing lanes, make sure no one is about to pass you.
- Before slowing down or stopping, be aware that the driver behind you may not expect you to slow or stop. For example, when you signal to make a turn, the driver behind you may miscalculate when you will slow and turn, and they may not slow down soon enough.



Most motorcycles have rounded (convex) mirrors. These provide a wider view of the highway behind than do flat mirrors. They also make vehicles seem farther away than they actually are. If you are not used to convex mirrors, get familiar with them. (While stopped, pick out a parked vehicle in the mirror. Form a mental image of how far away it is. Then, turn around and look at it to see how close it really is.) Practice with the mirrors until you become a good judge of distance. Even then, allow extra distance before changing lanes.

## HEAD CHECKS

Checking the mirrors is not always enough. Motorcycles have “blind spots” like vehicles do. Before changing lanes, merging onto a freeway, or passing another vehicle, turn your head and look for other vehicles. On a road with several lanes, check both the far lane and the one next to the motorcycle. A driver a couple of lanes over may head for the same space you plan to take. Frequent head checks should be part of your SIPDE process. Only by knowing what is happening all around the motorcycle are you fully prepared to deal with hazards.

## HORN

Be ready to use the motorcycle horn to get someone's attention quickly. It is a good idea to give a quick honk before passing any vehicle that may move into your lane. Here are some situations:

- A driver in the next lane is driving too close to the vehicle ahead and may want to pass.
- A parked vehicle has someone in the driver's seat.
- Someone is in the street, riding a bicycle or walking.

In an emergency, press and hold the horn. Be ready to stop or swerve away from the danger. Keep in mind that a motorcycle's horn is not as loud as a vehicle's horn—therefore, consider using it, but do not rely on it.

Other strategies, like having time and space to maneuver, may be appropriate along with the horn.

## RIDING AT NIGHT

At night it is harder to see and be seen. Noticing the motorcycle headlight or taillight amid the vehicle lights around the motorcycle is not easy for other drivers. To compensate for this:

- **Reduce Speed** – Ride even slower than during the daytime—particularly on roads you do not know well. This will increase the chances of avoiding hazards because a headlight does not allow you to see as far ahead as in daylight.
- **Increase Distance** – Distances are harder to judge at night than during the day. Our eyes rely upon shadows and light contrasts to determine how far away an object is and how fast it is coming. These contrasts may be missing or distorted under artificial lights at night. Increase to a four-second following distance or more and allow more distance to pass and be passed.
- **Use the Vehicle Ahead** – The headlights of the vehicle



ahead of you may give you a better view of the highway than even the high beam can. Headlights and/or taillights bouncing up and down can alert you to bumps or rough pavement ahead.

- **Use the high beam** – You need to get all the light you can. Use the high beam when not following or approaching a vehicle. Be visible. Wear retro-reflective materials.
- **Be flexible about lane position** – Change to whatever portion of the lane is best for seeing and being seen and maintain an adequate space cushion.

## CRASH AVOIDANCE

No matter how careful a motorcycle rider is, there will be times when they may find themselves in a dangerous situation. The chances of getting out safely depend on their ability to react quickly and properly. Often, a crash occurs because a motorcycle rider is not scanning far enough ahead, is not prepared or not skilled in obstacle-avoidance maneuvers.

Two skills critical in helping to avoid a crash are understanding when and how to stop or swerve. It is not always desirable or possible to stop quickly to avoid an obstacle. Motorcycle riders must also be able to swerve around an obstacle. Determining which skill is needed for the situation is important as well.

Studies show that most motorcycle riders in crashes:

- Under-brake the front tire and over-brake the rear.
- Did not separate braking from swerving, or did not choose to swerve when it was the most appropriate course of action.

## QUICK STOPS

A quick stop is achieved by fully applying both front and rear brakes without locking either wheel. Do not grab the front brake; rather, squeeze the brake lever firmly with increasing pressure. At the same time, press down on the rear brake pedal.



## FRONT-WHEEL SKIDS

A front-wheel skid is caused by over-applying the front brake. Front-wheel skids result in immediate loss of steering control and balance. If the front wheel locks, release the front brake immediately and completely. Reapply the brake smoothly and properly. Failure to fully release the brake lever immediately can result in a crash. ABS is designed to prevent front-wheel skids.

## REAR-WHEEL SKIDS

A skidding rear tire is a dangerous condition that can result in a violent crash and serious injury or death. Too much rear brake pressure can cause rear-wheel lockup. As soon as the rear wheel locks, the ability to change direction is lost. To regain control, the brake must be released immediately and completely. Reapply the brake smoothly and properly with light-to-lighter pressure.

If the rear wheel is out of alignment with the front, there is a risk of a high-side crash. This occurs when the wheels are out of alignment as a locked rear wheel is released.

The motorcycle can abruptly snap upright and tumble, throwing a rider into the air. Even a slight misalignment can result in a high-side crash. The farther out of alignment the rear wheel becomes, the greater the risk of a high side crash. That's why it

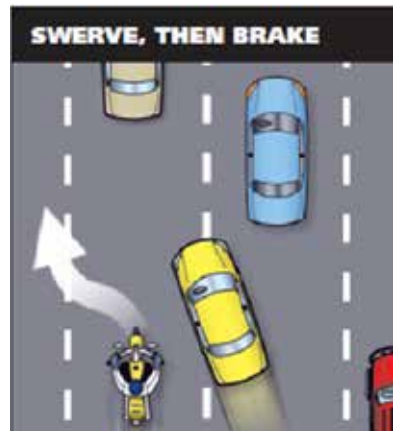
is important to release immediately—before the wheels get out of alignment. ABS is designed to prevent skids.

## SWERVING OR TURNING QUICKLY

Sometimes there is not enough room to stop, even when using both brakes properly. The vehicle ahead might squeal to a stop or an object might appear suddenly in your path. The only way to avoid a crash may be to turn quickly or to swerve.

A swerve is a rapid change in direction and is executed by two consecutive counter steers (essentially two quick turns). To initiate a swerve, apply a enough forward pressure on the handgrip in the intended direction of escape to effectively change directions. This will cause the motorcycle to lean quickly. Keep your body upright while allowing the motorcycle to lean beneath you. Keep your knees against the tank and your feet solidly on the footrests.

Make the escape route the target of your vision. Once clear of the obstacle, press on the opposite handgrip to return to the original direction of travel. To swerve to the left, press the left handgrip, when clear of the obstacle, press the right handgrip to straighten. To swerve to the right, press right, then left.

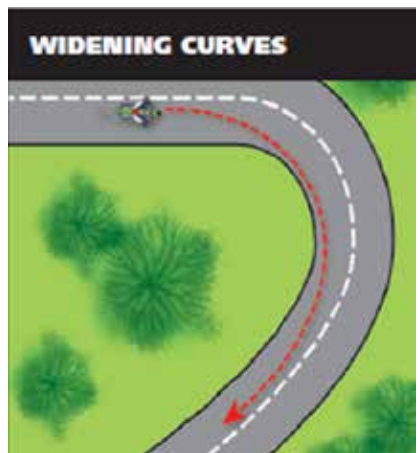
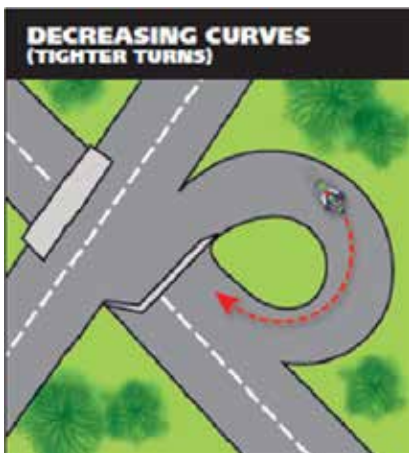
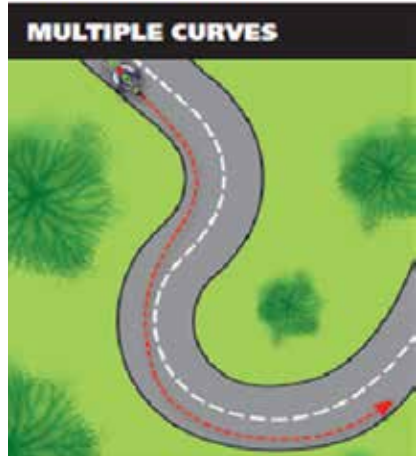
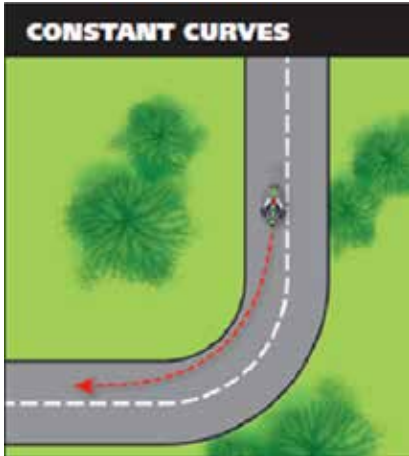


**IF BRAKING IS REQUIRED, BRAKE BEFORE OR AFTER SWERVING—DO NOT BRAKE WHILE SWERVING.**

Change lanes only if there is enough time to make sure there are no vehicles in the other lane. The motorcycle may be able to squeeze by most obstacles without leaving your lane.

### CORNERING & CURVES

A primary cause of motorcycle crashes is when the motorcycle rider takes a curve or turn too wide and collides with the highway or a fixed object.



In fact, in Idaho, over 40% of fatal motorcycle crashes are single vehicle accidents where a rider failed to negotiate a turn.

You should always ride within your own skill level and within the posted speed limits. Every curve is different and requires your full attention. Be alert to whether a curve remains constant, gradually widens, gets tighter, or involves multiple turns. Keeping your eyes up, looking all the way through the turn will help guide you through turns. Keep in mind the best path may not always follow the curve of the road.

Change lane positions depending on traffic, highway conditions, and curve of the road. One recommendation is to start toward the outside of a curve to increase your line of sight then move toward the inside of the curve as you pass the apex of the turn. As you exit the turn, move toward the outside of the curve. This strategy makes the turn less sharp, increases ground clearance, and helps to set you up for the next turn.

An alternative path is to move to the center lane position before entering a curve and remain until exiting. While this path maximizes your space cushion, it does not provide the best line of sight and can make the turn more sharp.

Always use SIPDE to adjust your line for traffic “crowding” the center line, debris blocking part of your lane, or other hazards. Also, use extra caution when braking in turns. If you apply the brakes too hard, the motorcycle may straighten upright causing you to run out of your lane.

## **HAZARDOUS RIDING CONDITIONS**

Chances of being involved in a crash may increase when riding across or in:

- Obstacles on the highway
- Slippery and loose surfaces
- Railroad tracks and grates
- Wind and other conditions

## OBSTACLES



### OBSTACLES ON THE HIGHWAY

Watch for uneven surfaces such as speed bumps, broken pavement, potholes, rocks, or pieces of highway debris. Try to avoid obstacles by going around them. If conditions do not permit going around an obstacle, first determine if it is possible to go across. Try to approach the hazard at as close to a 90° angle as possible. Look at the intended path of travel to remain in control. If riding over the obstacle, you should:

- Slow down as much as possible before contact.
- Make sure the motorcycle is straight.
- Rise slightly off the seat with your weight on the footrests to absorb the shock with your knees. Rising off the seat will reduce the chances of being thrown off the motorcycle. However, controlling the throttle can be somewhat tricky from this position. Practice this in an area such as an empty parking lot away from traffic.
- Just before contact, roll on the throttle slightly to lighten the front end. If you suspect possible damage as a result of riding over an object, pull off the highway and check the tires and rims for damage before riding any farther.

## SLIPPERY & LOOSE SURFACES

Motorcycles handle better when ridden on surfaces with good traction.

Surfaces that provide poor traction include:

- **Wet or Snow Covered Pavement** – When it starts to rain, before surface oil washes to the side of the highway, the center portion of a lane is usually the most slippery. Rain dries and snow melts faster on some sections of highways than on others. Patches of ice tend to crop up in low or shaded areas and on bridges and overpasses. Wet surfaces, leaves, or mud may be just as slippery. Ride on the least slippery portion of the lane with reduced speed. Cautious riders steer clear of highways covered with ice or snow. If unable to avoid a slippery surface, keep the motorcycle straight up and proceed slowly and smoothly.
- **Dirt, Sand, or Gravel Highways** – Dirt, sand, and gravel are most likely to collect at the sides of paved roads or in the middle of intersections. However, some roads may be completely covered with dirt or gravel due to construction.
- **Oil or Fresh Tar** – Avoid if possible. When riding across tar snakes (patches where tar has been used to seal cracks in the road), the traction can suddenly change and the tires could slip, especially on a hot day. Go slow and avoid any sudden movements. When stopping or parking on fresh oil or tar, make sure your side stand is secure before getting off the motorcycle since it may be slippery. It's also a good idea to place a hard object under your side stand so it does not sink in the fresh asphalt.
- **Lane Additions** – Steel plates and manhole covers may be especially slippery when wet and/or cold.

To ride safely on slippery or loose surfaces:

- **Reduce Speed** – Before getting to a slippery or loose

surface, slow down to lessen the chances of sliding or laying the motorcycle down. The motorcycle needs more distance to stop than other vehicles.

- **Avoid Sudden Moves** – Any sudden change in speed or direction can cause a skid. Be as smooth as possible with the throttle and when shifting gears, turning, or braking.
- **Use Both Brakes** – The front brake is still effective, even on a slippery or loose surface. Squeeze the brake lever gradually to avoid locking the front wheel. Remember, gentle pressure on the rear brake.
- **Reduce Lean Angles** – Keep your motorcycle as upright as possible when riding across slippery surfaces.
- **The Center of a Lane** – It may be hazardous when wet. When raining, consider riding in the tire tracks left by vehicles.

When encountering a large surface that is so slippery that coasting or traveling at a walking pace is required, squeeze in the clutch and coast across without any sudden inputs. Keep the motorcycle as vertical as possible and avoid braking if at all possible. Attempting this maneuver at anything other than the slowest of speeds can be hazardous.

## **RIPPLED & UNEVEN PAVEMENT EDGES**

Scan the pavement and pick the smoothest line. Cross slowly and carefully. Be aware of the differences in height between lanes that have been repaved and those waiting to be paved. Crossing into the higher lane at high speeds and a narrow angle could cause you to lose control.

## **WIND**

Strong, steady winds and irregular wind gusts can affect the motorcycle and rider. This can occur anywhere and most often happens in open areas or mountainous terrain. Wind turbulence also occurs when sharing the highway with large vehicles (i.e. trucks, buses).



### **To respond to steady winds:**

- Lean into the wind, apply forward pressure on the handgrip.
- Find a safe place to park until conditions improve if the wind becomes too dangerous to continue.

### **To respond to wind gusts or windblasts:**

- Move away from other vehicles as they approach or pass.
- Maximize the space-cushion around the motorcycle.

## **CROWNED PAVEMENT**

A highway surface that is higher in the middle than at the sides is a crowned highway. Be aware that to the left, the ground clearance is reduced and the lean angle available will be less than on a flat highway.

## **ANIMALS**

Riding the motorcycle as alert and safely as possible by using SIPDE or another mental strategy will be a great asset to avoid hitting an animal. When in traffic, however, remain in your lane. Hitting something small is less dangerous than hitting something big — like a vehicle. It is best to accept that you may not be able to avoid a small animal in your path without increasing your risk.

Motorcycles seem to attract dogs. If being chased, shift down and approach the animal slowly. As you get closer to the point of intersection with the dog, accelerate and swerve out of its reach. Do not kick at any animal. You need to keep your balance and maintain control of the motorcycle.



For larger animals (deer,

elk, cattle), brake and prepare to stop. They tend to be unpredictable. Be aware that they are herd animals—if you see one, expect to see more.

## FLYING OBJECTS

From time to time, motorcycle riders are struck by insects, cigarettes thrown from vehicles, or rocks thrown by the tires of the vehicle ahead. When wearing face protection, it might get smeared or cracked, making it difficult to see. Without face protection, an object could hit you in the eye, face, or mouth. Whatever happens, try to keep your eyes on the highway and your hands on the handlebars. When safe, pull off the highway and replace your damaged visor or eye protection if possible.

## RAILROAD OR TROLLEY TRACKS

### Cross Tracks

Usually, it is safer to ride straight within your lane to cross tracks. For tracks that cross your path at an angle, turning to take them head-on (at a 90° degree angle) can be more dangerous and may carry you into another lane of traffic.



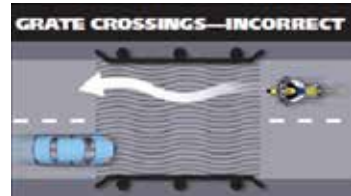
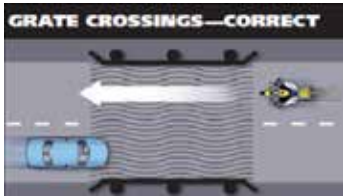
### Parallel Tracks

Move far enough away from tracks, ruts, or pavement seams that run parallel to your path in order to cross at an angle of 45° degrees. Then make a deliberate turn. Edging across could catch the tires and throw you off balance.



## GROOVES AND BRIDGE GRATINGS

Riding over rain grooves or bridge gratings may cause the motorcycle to weave or wander. Though disconcerting, the wandering feeling is generally not hazardous. Maintain a steady speed and ride straight across. Avoid any sudden inputs or excessive lean angles.



## MECHANICAL PROBLEMS

Something going wrong with the motorcycle may put you immediately into an emergency situation. In dealing with any mechanical problem, take into account the highway and traffic conditions. The following sections include some guidelines that can help assist in handling mechanical problems safely.

### TIRE FAILURE

Seldom will you hear a tire going flat. When the motorcycle starts handling differently, it may be a tire failure—this can be dangerous. When one of the tires loses air, react quickly to keep the motorcycle balanced and upright. Pull off and check the tires. If the front tire goes flat, the steering will feel “heavy.” A flat front wheel is particularly hazardous because it affects your ability to steer the motorcycle and keep it upright.

If the rear tire goes flat, the back of the motorcycle may feel sluggish and may sway or wobble from side to side.

#### **If either tire goes flat while riding:**

- Hold the handle grips firmly, squeeze in the clutch to coast, and keep a straight course.
- When braking, gradually apply the brake of the tire that is not flat.

- When the motorcycle slows, edge to the side of the highway and stop.

## **STUCK THROTTLE**

If your throttle becomes stuck while riding, immediately use the engine cut-off switch and pull in the clutch at the same time. This will remove power from the rear wheel. Once you have the motorcycle “under control,” pull off and stop. Check the throttle cable carefully to find the source of the trouble. Make certain the throttle works freely before starting to ride again.

## **WOBBLE**

A “wobble” typically occurs when the front wheel and handlebars on the motorcycle suddenly start to shake from side to side at any speed. Most wobbles can be traced to improper loading, unsuitable accessories, incorrect tire pressure, or misaligned tires and/or chain drive.

If carrying a heavy load, center the weight lower and farther forward on the motorcycle. Make sure tire pressure, spring pre-load, air shocks, and dampers are at the settings recommended for that weight. Do not exceed the Gross Vehicle Weight Rating (GVWR) for your motorcycle. GVWR includes the weight of the motorcycle, the rider, any cargo, and any passenger.

If loading is not the cause of the wobble, make sure windshields and fairings are mounted properly. Check for poorly adjusted steering, worn steering parts, a front wheel rim that may be bent, misaligned or out of balance, loose wheel bearings or spokes, and swing arm bearings. If none of these are determined to be the cause, have the motorcycle checked out thoroughly by a qualified professional. Trying to “accelerate out of a wobble” may only make the motorcycle more unstable.

**Instead:**

- Hold the handle grips firmly, but do not fight the wobble.
- Squeeze in the clutch and gradually slow the motorcycle.
- Do not apply the brakes; braking could make the wobble worse.
- Move as far forward in the saddle as physically possible.
- Pull off the highway as soon as possible to fix the problem.

**DRIVE TRAIN PROBLEMS**

The drivetrain for a motorcycle uses either a chain, belt, or driveshaft to transfer power from the engine to the rear wheel. Routine inspection, adjustments, and maintenance make a drivetrain failure a rare occurrence. A chain or belt that slips or breaks while riding the motorcycle could lock the rear wheel and cause the motorcycle to skid. If the chain or belt breaks, you will notice an instant loss of power to the rear wheel. Close the throttle and brake to a stop in a safe area.

On those motorcycle models with a driveshaft, loss of oil in the rear differential can cause the rear wheel to lock, and you may not be able to prevent the motorcycle from skidding.

**ENGINE SEIZURE**

If the engine “locks” or “freezes,” it is usually low on oil. The engine’s moving parts cannot move smoothly against each other, and the engine overheats. The first sign may be a loss of engine power or a change in the engine’s sound. Squeeze the clutch lever to disengage the engine from the rear wheel. Pull off the highway and stop. Check the oil. When needed, oil should be added as soon as possible or the engine may seize. When this happens, the effect is the same as a locked rear wheel. You could ruin the engine by restarting.

**There is no substitute for frequent routine and preventative motorcycle maintenance.**

## GETTING OFF THE HIGHWAY

When needing to leave the highway to check the motorcycle (or just to rest) be sure to:

- **Check the roadside** – Make sure the surface of the roadside is firm enough to support the weight of the motorcycle. If it is soft grass, sand, or if you are unable to quickly determine what type of surface it is, slow down considerably before turning onto it.
- **Signal** – Drivers behind the motorcycle may not expect you to slow down. You should give clear signals that you will be slowing down and changing directions by tapping your brakes to flash your brake lights in advance of slowing. Before taking action check the mirror and make a head check.
- **Pull off the highway** – Get the motorcycle as far off the road as possible. It can be extremely hard to spot a motorcycle parked on the side of the road.
- **Park carefully** – Loose and sloped shoulders may make it hard to safely set the side or center stand on the motorcycle.

## CARRYING PASSENGERS AND CARGO

Only experienced motorcycle riders should carry passengers or large loads. The extra weight changes the way the motorcycle handles, balances, turns, speeds up, and slows down. Before traveling with a passenger or heavy load upon the highway, practice away from traffic in a controlled, safe area.

If you can, adjust the motorcycle suspension to handle the additional weight. (Check motorcycle owner's manual.) Consider adding a few pounds of pressure to the tires if carrying a passenger. With both you and the passenger sitting on the seat, adjust the mirrors according to the change in the motorcycle's angle to ensure your vision to the rear is not obstructed.

## REQUIRED EQUIPMENT

### To carry passengers safely:

- Equip and adjust your motorcycle to carry passengers.
- Instruct your passenger before you start.
- Adjust your riding technique for the added weight.
- Have passengers wear the same type of protective gear recommended for motorcycle riders.

### The following equipment is required by Idaho law:

- **A proper seat** – large enough to hold both the rider and passenger without crowding, or a separate, permanently attached passenger seat. Do not sit any farther forward than usual.
- **Footrests** – for the passenger. A firm footing prevents the passenger from falling off and pulling the rider off as well. The passenger must be able to reach the footrests and should keep their feet on the pegs even when stopped.
- **A helmet** – any person under the age of eighteen (18) must wear a DOT-compliant helmet while operating or riding on a motorcycle.

Children should be placed immediately behind the motorcycle rider. Carrying a child-passenger on a motorcycle in front of you is not legal in Idaho. With a child sitting in front of you, you will not be able to properly balance yourself and they may interfere with control of the motorcycle.

## INSTRUCTING PASSENGERS

Even if the passenger is a motorcycle rider, provide complete instructions before starting to ride. As the passenger mounts, keep both of your feet on the ground and the front brake applied.

### Tell your passenger to:

- Sit as far forward as possible without crowding you.
- Hold firmly to your waist, hips, or belt.
- Keep both feet on the pegs, even when stopped.
- Keep legs away from the muffler, chains and moving parts.

- Stay directly behind you, leaning as you lean.
- Avoid unnecessary talk or motion.

Also, tell the passenger to tighten their hold as you are about to start from a stop and as you approach surface problems.

Whenever possible, warn your passenger that you are going to make a sudden move.

## RIDING WITH PASSENGERS

The motorcycle will respond more slowly with a passenger on board. The heavier the passenger, the longer it may take to slow down, speed up, or turn—especially on a lighter motorcycle.

- Ride a little cautiously, especially when taking curves, corners, or bumps.
- Start slowing earlier when approaching a stop.
- Maintain a larger space-cushion ahead and to the sides.
- Wait for larger gaps in traffic to cross, enter, or merge onto the roadway.

Warn passengers of special conditions—when pulling out, stopping quickly, turning sharply, or riding over a bump.

## CARRYING LOADS

Most motorcycles are not designed to carry much cargo. Small loads can be carried safely if positioned and fastened properly.

- **Keep the Load Low** – Fasten loads securely, or put them in saddle bags. Piling loads against aissy bar or frame on the back of the seat may raise the motorcycle's center of gravity and upset its balance.
- **Keep the Load Forward** – Place the load over, or in front of, the rear axle. Tank bags keep loads forward, but use caution when loading hard or sharp objects. Make sure a tank bag does not interfere with the handlebars or controls.



Mounting loads behind the rear axle can affect how the motorcycle turns and brakes. It can also cause a wobble.

- **Distribute the Load Evenly** – Load each saddlebag with about the same amount of weight. An uneven load can cause the motorcycle to drift to one side.
- **Secure the Load** – Fasten the load securely with elastic cords (multiple bungee cords or nets). A secured load will not catch in the wheel or chain. Rope tends to stretch and knots come loose, permitting the load to shift or fall, which could cause the motorcycle to lock up and skid.
- **Check the Load** – Stop and check the load often to make sure it has not worked loose or moved. Whatever passenger and/or cargo you carry, do not exceed the gross vehicle weight rating of the motorcycle and make adjustments to the motorcycle to compensate for the added weight.

## GROUP RIDING

When riding with other motorcycle riders, do it in a way that promotes safety and does not interfere with the flow of traffic.

### KEEPING THE GROUP SMALL

Small groups of motorcycle riders make it easier and safer for vehicles that need to get around the group of motorcycles. A small number isn't separated as easily by traffic or red lights.

The other motorcycle riders in the group won't always be hurrying to catch up. When the group is larger than four or five riders, divide it up into two or more smaller groups.

### KEEPING THE GROUP TOGETHER

- **Plan** –The leader of the motorcycle rider group should look ahead for changes and signal early so “the word gets back” to the other riders in plenty of time. Start lane changes early to allow all the riders to complete the lane change.

- **Put Beginners Up Front** – Place inexperienced motorcycle riders just behind the lead motorcycle rider. That way, the less experienced riders are not exceeding their comfort and skill levels by trying to keep up with the more experienced riders in the group.
- **Follow Those Behind** – Let the motorcycle rider on the tail end set the pace. Use the mirrors to keep an eye on the person behind. If one rider falls behind, all riders should slow down a little to stay with the tail ender.
- **Know the Route** – Make sure all riders know the route. When a rider gets separated, they won't have to hurry to keep from getting lost or taking a wrong turn.

## KEEPING ADEQUATE DISTANCE BETWEEN MOTORCYCLES

Many motorcycle riding groups like to keep close ranks, but it is important to keep a safe distance to allow each rider in the group time and space to react to hazards. A close group takes up less space on the highway, is easier to see, and is less likely to be separated. However, it must be done properly.

- **Do not pair up** – Never ride directly alongside another rider. There is no place to go to avoid a vehicle or a hazard on the road. To talk to another motorcycle rider, wait until you are both stopped.
- **Staggered formation** – This is the best way to keep ranks close yet maintain an adequate space cushion.

The lead motorcycle rider is in the left side of the lane, while the second motorcycle rider stays 1 1/2 to 2 seconds behind in the right side of the lane. A third motorcycle rider stays in the left position, 3 to 4 seconds behind the first motorcycle rider. The fourth motorcycle rider would keep a 3- to 4-second distance behind the second motorcycle rider.

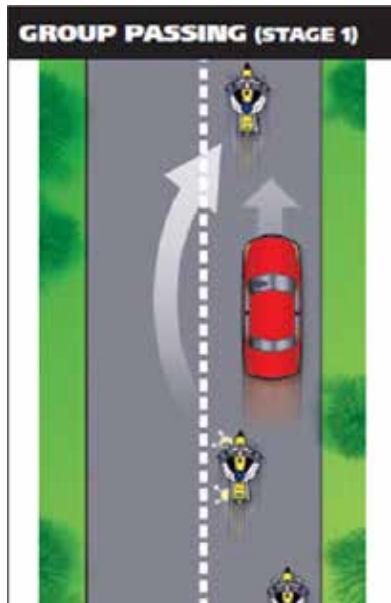
Staggered formation keeps the group close and discourages traffic from breaking into the formation

while still giving each rider a safe space cushion and an escape route.

- **Passing in formation** – When the group wants to pass slow traffic on a freeway or interstate, the group may pass as a unit. On a two-lane highway, motorcycle riders in a staggered formation should pass one at a time.

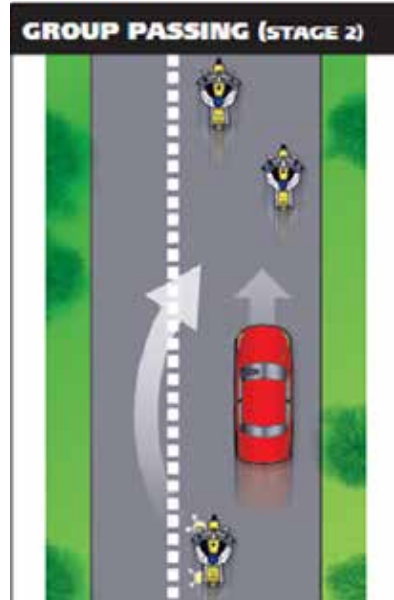
First, the lead rider should pull out and pass when it is safe. After passing, the lead rider should return to the left position and continue riding at passing speed to open room for the next rider.

After the lead rider passes safely, the second rider should move up to the left position



and watch for a safe chance to pass. This rider should return to the right position and open up room for the next rider.

Some people suggest that the lead motorcycle rider should move to the right side after passing a vehicle. This is not a good idea. It encourages the second motorcycle rider to pass and cut back in before there is a large enough space cushion in front of the passed vehicle.



It's simpler and safer to wait until there is enough room ahead of the passed vehicle to allow each rider to move into the same position held before the pass.

- **Single-file formation** – It is best to move into a single-file formation when riding motorcycles on curvy roads, when turning, and when entering or leaving a freeway or highway.

# **RIDER RISKS & RESPONSIBILITIES**

Riding a motorcycle is a demanding and complex task. Skilled motorcycle riders pay attention to the riding environment and to operating the motorcycle, identifying potential hazards, exercising good judgment, and executing decisions quickly and skillfully.

The ability to perform and respond to changing highway and traffic conditions is influenced by how fit and alert the motorcycle rider is. Alcohol and drugs, more than any other factor, degrade the ability to think clearly and to ride safely. As little as one drink can have a significant effect on riding performance. Let's look at the risks involved in riding a motorcycle after drinking or using drugs and what you can do to protect yourself and fellow riders.

## **IMPORTANT INFORMATION**

Alcohol is a major contributor to motorcycle crashes, particularly fatal crashes. National studies show that over one-third of all riders killed in motorcycle crashes had been drinking, and only one-third of those riders had a blood alcohol concentration (BAC) above legal limits. The other riders were under the legal limits but riding skills were still impaired. In the past, drug levels have been harder to distinguish or have not been separated from drinking violations. Riding a motorcycle "under the influence" of either alcohol or drugs poses physical and legal hazards for every motorcycle rider.

Alcohol and drug use occurs among other drivers; however, motorcyclists are more likely to be killed or severely injured in a crash. Injuries occur in 90% of motorcycle crashes and 33% of automobile crashes that involve abuse of substances. On a yearly basis, 2,000 motorcyclists are killed and about 50,000 seriously injured in this same type of crash.

## **ALCOHOL & DRUGS WHILE RIDING**

No one is immune to the effects of alcohol and drugs. Friends may brag about their ability to hold their liquor or perform better on drugs. However, alcohol and drugs make people less able to think clearly and perform physical tasks skillfully.

Judgment and the decision-making processes needed for riding a motorcycle are affected long before legal limits are reached. Many over-the-counter, prescription, and illegal drugs have side effects that increase the risk of riding a motorcycle safely. It is difficult to accurately measure the use of particular drugs in motorcycle crashes. We know what effects various drugs have on riding skills and that the combined effects of alcohol and drugs when taken together are much more dangerous.

## **ALCOHOL IN THE BODY**

Alcohol enters the bloodstream quickly. Unlike foods and beverages, it does not need to be digested. Within minutes of consumption, it reaches the brain and begins to affect the drinker. Alcohol slows down and impairs bodily functions (both mental and physical), which adversely affects coordination, balance, the ability to think clearly and make sound judgments.

## **BLOOD ALCOHOL CONCENTRATION (BAC)**

Blood Alcohol Concentration (BAC) is the amount of alcohol in relation to blood in the body. Generally, alcohol can be eliminated in the body at the rate of almost one drink per hour. However, a variety of other factors may also influence the level of alcohol retained. The more alcohol there is in the blood, the greater the impairment.

### **Three factors play a major part in determining BAC:**

- Amount of alcohol consumed.
- Rate of consumption.
- Body weight.

Other factors contribute to the way alcohol affects the system and may cause the BAC level to be even higher, such as gender, physical condition, and the amount of food.

The full effects of these are not completely known. **Alcohol may still accumulate in your body even if you are drinking at a rate of one drink per hour.** Abilities and judgment can be affected by that one drink.

A 12-ounce bottle of beer, 8-ounce bottle of malt liquor, 5-ounce glass of wine, and a 1 ½ ounce of distilled spirits or liquor all contain the same amount of alcohol\*. The faster they are consumed, the more alcohol accumulates in the body. At the end of one hour, drinking at a rate of two drinks per hours, at least one drink will remain in your bloodstream. Without taking into account any other factors, these examples illustrate why time is a critical factor when a motorcycle rider decides to drink.



**\*Alcohol by Volume (ABV) varies in beer, wine, and spirits; therefore this may not hold true for all comparisons.**

**A person who drinks:**

- **Seven drinks** over the span of three hours would have at least four ( $7-3 = 4$ ) drinks remaining in their system at the end of the three hours. They would need at least another four hours to eliminate the remaining drinks before riding.
- **Four drinks** over the span of two hours would have at least two ( $4-2 = 2$ ) drinks remaining in their system at the end of the two hours. They would need at least another

two hours to eliminate the two remaining drinks before they consider riding.

There are times when a larger person may not accumulate as high a concentration of alcohol for each drink consumed because they have more blood and other bodily fluids. Because of individual differences, it is better not to take the chance that abilities and judgment may have been affected. Whether or not they are legally intoxicated is not the real issue. Impairment of judgment and riding skills begins well below the legal limit.

## ALCOHOL AND IDAHO LAW

It is considered to be driving under the influence (DUI) if the driver's BAC is:

- .02 or more and the driver is under 21 years of age.
- .04 or more and the driver is operating a commercial motor vehicle (CMV).
- .08 or more and the driver is 21 years of age or older.

An alcohol concentration of .20 or more carries even stiffer penalties. ***Even if your BAC is less than .08, you may still be convicted of a DUI.***

## PENALTIES WHEN COMPLETING & FAILING A BREATH TEST

Idaho law now imposes stiffer penalties on DUI offenses than in the past. Most penalties are mandatory and imposed by the court.

### When convicted in Idaho and over 21:

- For a first conviction – Up to six (6) months in jail; up to a \$1,000 fine; mandatory driver's license suspension of at least ninety (90) days and up to 180 days with no driving privileges for the first thirty (30) days. After the thirty (30) day court suspension, a request may be made to the court for restricted driving privileges (RDP) if determined



necessary. (CMV does not qualify for RDP). An ignition interlock device is required after the suspension ends.

- For a second conviction within 10 years – Mandatory jail time of ten (10) days and maximum jail sentence of one (1) year; up to a \$2,000 fine; mandatory driver's license suspension of one (1) year after release of confinement. An ignition interlock device required after the one (1) year mandatory suspension.
- For three or more convictions within 10 years – Sentenced to the State Board of Corrections not to exceed ten (10) years; up to a \$5,000 fine; mandatory driver's license suspension for one (1) year after release from confinement, and up to an additional four (4) years may be added to the suspension. An ignition interlock device is required after the one (1) year mandatory suspension. This conviction is a felony.

**Refer to Idaho Code 49-18-8004A for penalties for conviction under 21 and Idaho Code 49-18-8004C for penalties for conviction of excessive DUI.**

## **ALCOHOL TEST REFUSAL**

**Implied Consent** – Any person who drives or is in physical control of a motor vehicle has given their consent to take a BAC or drug test if pulled over. If enforcement personnel suspects a vehicle operator is driving under the influence, they may request a breath test. Refusal of the breath test leaves the driver's license subject to suspension (under the provisions of Section 18-8002 of Idaho Code).

Upon refusal of a requested breath test, enforcement personnel will issue a **Notice of Suspension**. If the court upholds the officer's findings, the license will be suspended for one year with absolutely no driving privileges of any kind, if it is a first offense. A second refusal within 10 years results in a two-year absolute suspension and is in addition to any penalty from the court for a DUI conviction.

## ADMINISTRATIVE LICENSE SUSPENSIONS

Failure of an evidentiary test with a BAC over the legal limit following an arrest for operating a motor vehicle while under the influence of alcohol or other intoxicating substances will result in being served with a **Notice of Suspension**. This Notice of Suspension is an ITD-imposed Administrative License Suspension (ALS) issued in accordance with Section 18-8002A, Idaho Code. The driver has the right to request an administrative hearing for an ALS with an ITD-designated hearing officer.

The ALS penalty is a civil penalty and is separate and apart from any criminal penalties imposed by the court system. Drivers who receive an ALS must comply with the ALS requirements and appear in court on the appointed date regarding the criminal DUI charges brought against them. Their Notice of Suspension becomes effective thirty (30) days after the date of service (date notice received). For a first failure, driving privileges are suspended for a period of ninety (90) days with absolutely no driving privileges during the first thirty (30) days of that ninety (90) day suspension. Driving privileges are suspended for one (1) year with absolutely no driving privileges of any kind for a second failure of the test within five (5) years.

## MINIMIZE THE RISKS

Judgment is affected first and may give a motorcycle rider a false sense of confidence in their riding abilities. The rider may think they can ride well (or even better than when sober), but in reality, their skills are impaired. The rider may be riding more confidently but is taking greater risks. The best way to minimize risk is to separate drinking and riding.

## MAKE AN INTELLIGENT CHOICE

- **Do not drink** – Setting a limit or pacing are poor alternatives at best. The ability to exercise good judgment is the first thing affected by alcohol. Even if drinking in moderation, a rider may not realize to what extent their motorcycle riding skills have suffered from alcohol's effects.
- **Do not ride** – Plan ahead and leave the motorcycle at home. Have a designated driver or plan to ride share.
- **Leave the motorcycle** – Secure your motorcycle and get a ride home.
- **Wait** – Sit it out per the recommended guidelines until the alcohol and its effects exit the body.

## STEP IN & PROTECT FELLOW RIDERS

Motorcycle riders who have had too much to drink are often unable to make responsible decisions on their own. It is up to others to step in and keep them from getting on a motorcycle. No one wants to do this—it can be uncomfortable and thankless, but the alternatives are often way worse.

There are several ways to keep motorcycle riders from hurting themselves:

- **Arrange a safe ride** – Provide alternative ways for the rider to get home safely.
- **Slow the drinking** – Stop serving if you are the host and involve them in other activities.
- **Keep motorcycle riders there** – Use any excuse to keep a rider from getting on their motorcycle. Serve them food and coffee to pass the time. Take the key to the motorcycle if possible.
- **Get other riders involved** – It helps to enlist support from other motorcycle riders when deciding to step in. The more riders who step in, the easier it is to be firm and the harder it is for the impaired rider to resist. While you and the other riders may not be thanked at the time, you will never have to say, "If only I had..."

## FATIGUE

Riding a motorcycle is more fatiguing than driving a vehicle. Avoid riding a motorcycle when you are tired. Fatigue can significantly affect your control of the motorcycle.

- **Protection from the elements** – Wind, cold, and rain make a motorcycle rider tire quickly. Dress warmly. A windshield is worth its cost, especially when planning to riding long distances.
- **Limit the riding distance** – Experienced motorcycle riders know their limits for time in the seat and do not push themselves or others past those limits.
- **Take frequent rest breaks** – Stop and get off the motorcycle at least every two (2) hours to stretch and hydrate.
- **Do not drink or use drugs** – Artificial stimulants often result in extreme fatigue or depression when they start to wear off, making it very difficult to concentrate on the task of safely riding the motorcycle.

# TWO-WHEEL MOTORCYCLE SKILLS TEST

Basic motorcycle control and obstacle-avoidance skills are included in the skills test to determine the motorcycle rider's ability to handle normal and hazardous traffic situations. At a minimum, the motorcycle rider may be tested for the ability to:

- Demonstrate slow speed control.
- Accelerate, brake, and turn safely.
- Stop, turn, and swerve quickly.
- Adjust motorcycle speed and position.

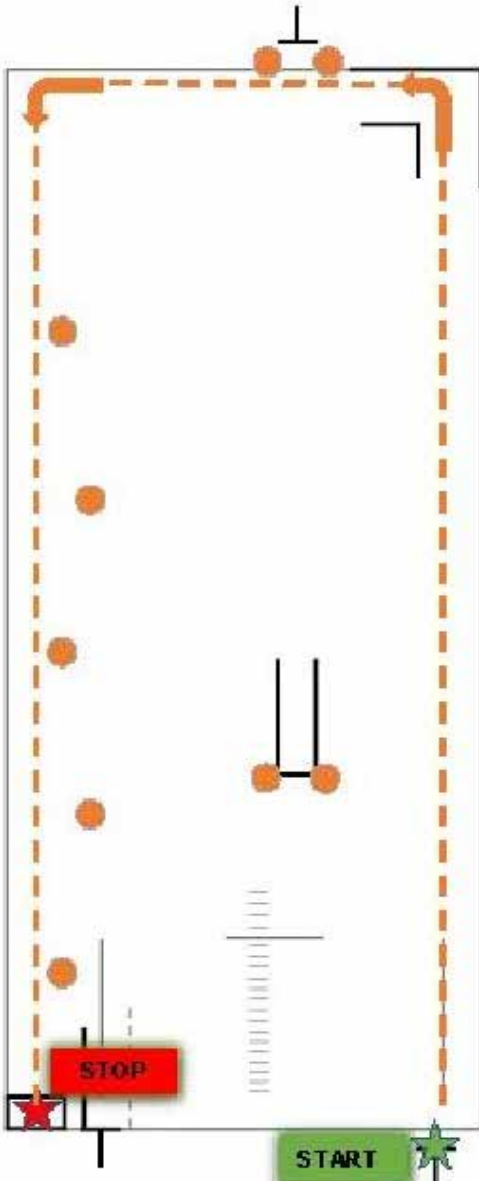
**Skills test examiners may score on factors related to safety such as:**

- Selecting safe speeds to perform the skills.
- Choosing the correct path and staying within boundaries.
- Completing normal and quick stops.
- Completing various turns and swerves.

Points will be deducted when the engine is stalled while attempting any of the skills. You will be graded on the ability to control the motorcycle, turn, stop quickly and ride the motorcycle in a straight line. The skills test examiner will also watch your posture and overall operation and attention. You may stop the skills test at any time. Do not attempt a skills test if not ready or comfortable doing it.

The following are some of the skills that are required to be demonstrated during the two-wheel motorcycle skills test:

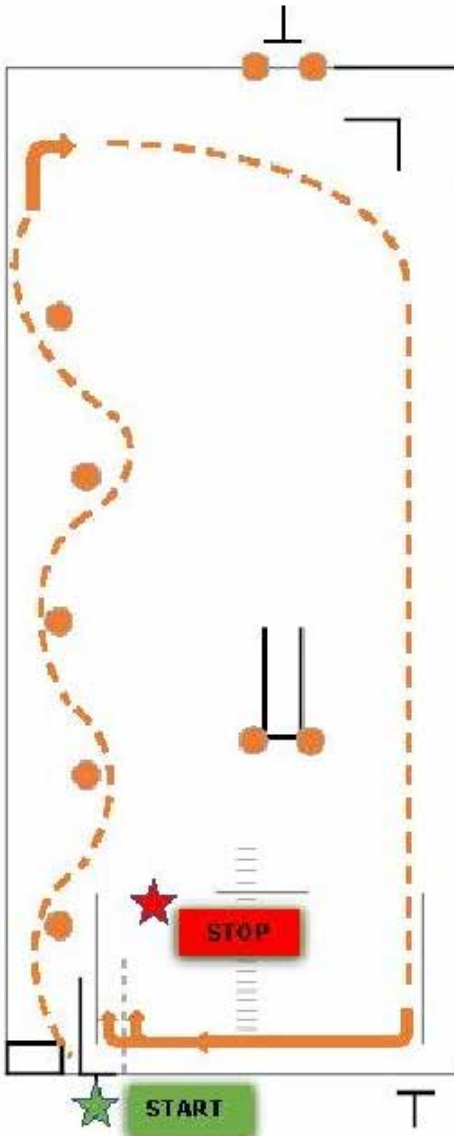
## Two-Wheel Motorcycle Skills Test



### SHARP TURN & NORMAL STOP

Accelerate straight ahead and make a sharp left turn inside the boundaries. Do not put a foot down or touch any lines.

Then ride toward this end of the course. Make a smooth, non-skidding stop with your front tire inside that box. Your front tire must not touch the painted lines.



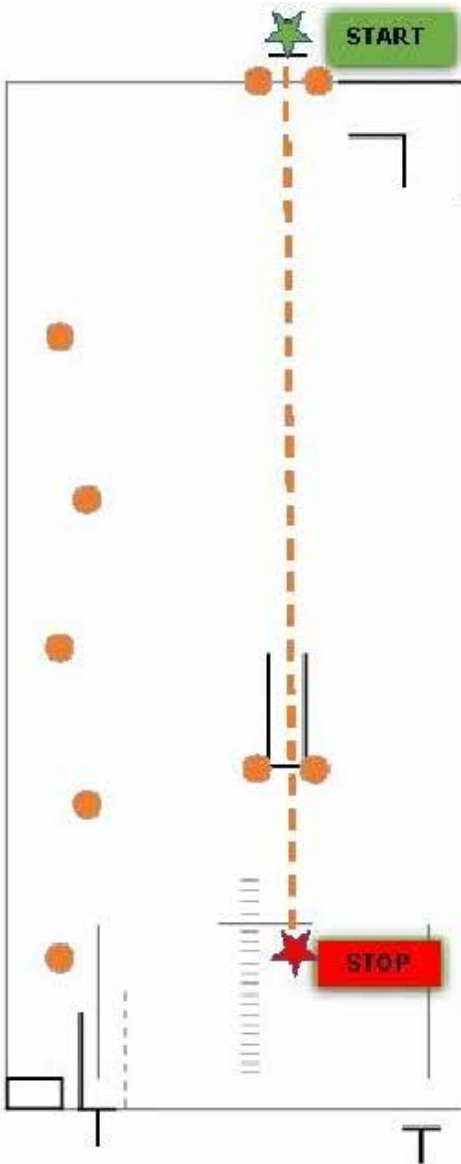
## CONE WEAVE & U-TURN

Ride to the left of the first cone, to the right of the second cone, and so on. Weave past all five cones without touching or skipping a cone, or putting your foot down.

Continue around to the far side of the course and make a right U-turn inside this box.

Do not touch the solid line (motorcycles over 500cc) or the dashed line (motorcycles 500cc or under) or put a foot down.

Stop near that line. Wait for further instructions.



## QUICK STOP

Position your motorcycle on that "T".

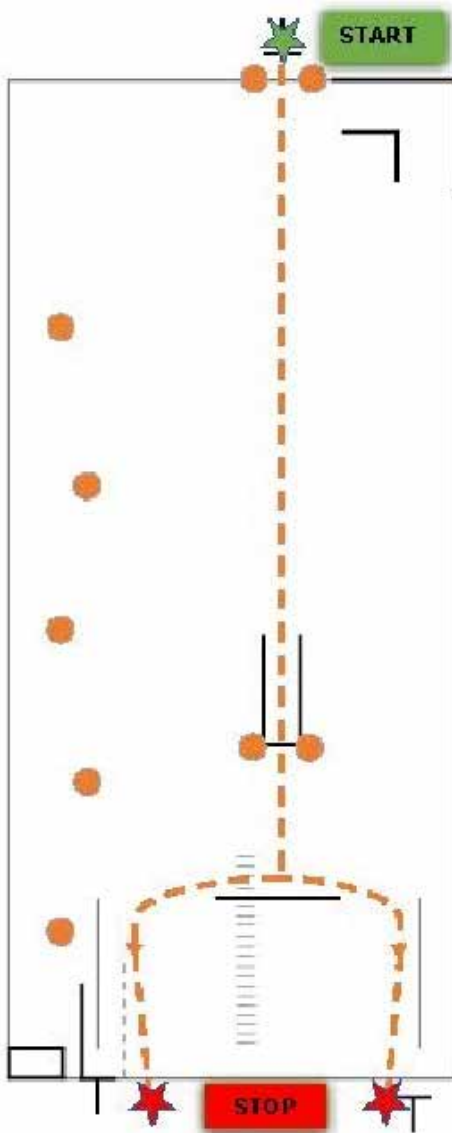
When signaled, accelerate straight up this path. Stabilize your speed between 12-20 mph by the time you reach the first line.

Maintain a steady speed.

When your front tire passes the second line, stop as fast as you safely can. You will not lose points if you skid.

Remain stopped until told to move.





## OBSTACLE SWERVE

Start at the "T".

When signaled, accelerate straight up this path. Stabilize your speed between 12-20 mph by the time you reach the first line.

Maintain a steady speed.

When your front tire passes the second line, swerve to the (left or right, tester's choice).

Avoid the obstacle line and stay to the inside of the side line. Do not touch either line. Once past the side line, stop and wait for further instructions.

# THREE-WHEEL MOTORCYCLE SUPPLEMENT

Requirements for licensing three-wheel motorcycles vary by state. In Idaho, a standard motorcycle (M) endorsement or a three-wheel restricted endorsement on a driver's license is required to ride a three-wheeled motorcycle on the highway. To obtain a three-wheel restricted endorsement, the applicant must pass the knowledge test for the motorcycle (M) endorsement and a skills test that has been modified to accommodate three-wheeled vehicles.

This information is provided in addition to that offered in the first part of this Motorcycle Riders Manual, so when preparing to take the knowledge test, begin by reading the information on two-wheel motorcycles thoroughly. It provides information on safe operation of the motorcycle on the highway. This supplement contains information specific to the safe operation of a three-wheel motorcycle, including both trike style motorcycles and motorcycles with sidecars.

## KNOWING THE MOTORCYCLE

There are many types of three-wheel motorcycles available on the market today. In general, three-wheel motorcycles will have the following characteristics:

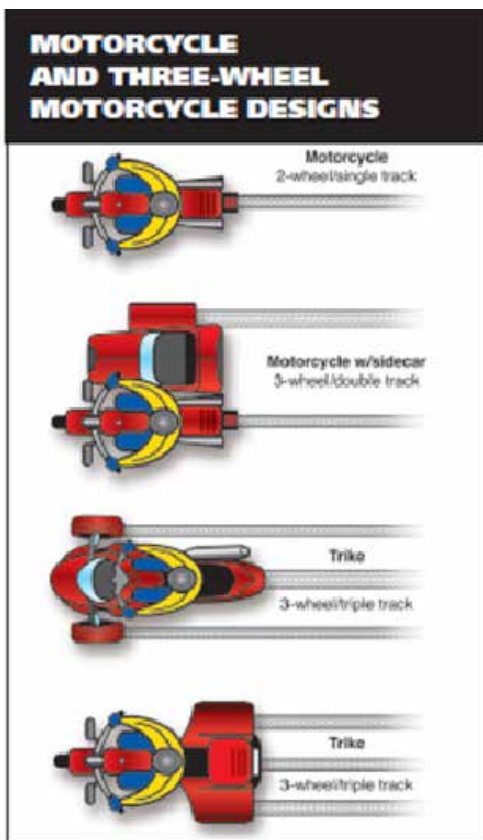
- Three wheels leaving two or three separate tracks during straight line operation.
- Motorcycle-based conversion or design with:
  - \* Handlebar steering.
  - \* Motorcycle-type controls with the standard layout.
  - \* Convenience alterations like a single brake pedal or lever control, automatic clutch, or automatic transmission.
  - \* Saddle-seating is seating where the rider/passenger straddles the vehicle. When designed for a passenger,

the passenger must be seated behind the rider (or in a separate passenger compartment in the case of a motorcycle with a sidecar.)

- \* The vehicle meets all applicable federal on-road standards.
- \* Turning diameter of the vehicle at its widest point must be less than 40'.

## THREE-WHEEL MOTORCYCLE DESIGNS

Three-wheel motorcycle designs vary among manufacturers. Unlike traditional motorcycles, which are considered single-track motorcycles, three-wheel motorcycles could be either dual or triple track design. Dual track vehicles are motorcycles with sidecars, while triple track motorcycles can be configured either with dual front wheels or dual rear wheels.



## THE RIGHT MOTORCYCLE FOR YOU

Make sure the three-wheel motorcycle or sidecar-equipped motorcycle is right for you. The motorcycle rider should be able to comfortably reach and operate all the controls and be able to complete full turns using the handlebars without excessive reach or upper body movements that could jeopardize stability and control.

## BORROWING AND LENDING

Borrowers and lenders, beware. Crashes are fairly common among beginning motorcycle riders, especially in the first month of riding. Operating an unfamiliar motorcycle adds to the problem. If borrowing a three-wheel motorcycle or motorcycle with sidecar, get familiar with it in a controlled area first. If lending a three-wheel motorcycle or motorcycle with a sidecar to friends, make sure they are licensed and know how to ride before they ride in traffic. These motorcycles handle very differently than two-wheeled motorcycles. No matter how experienced you are, be extra careful on any vehicle that is unfamiliar or new to you.

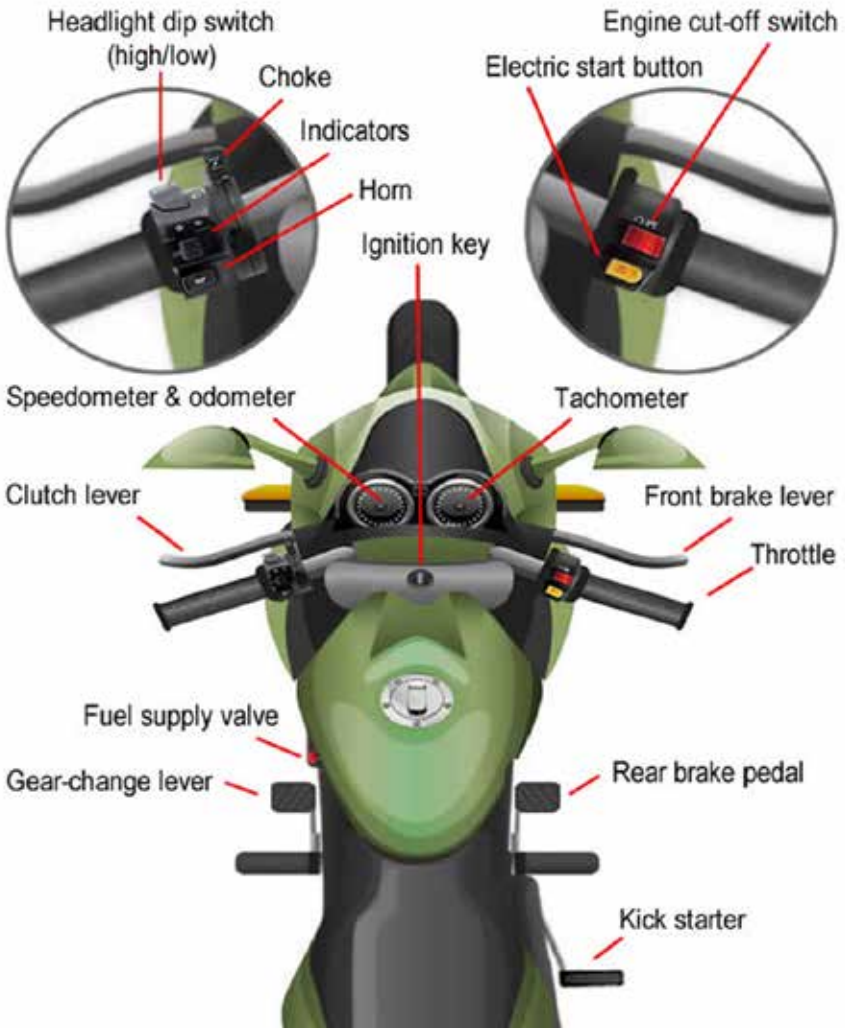
## BECOMING FAMILIAR WITH MOTORCYCLE CONTROLS

Be sure you are familiar with the controls of the three-wheel motorcycle or motorcycle with a sidecar before attempting to ride it on any highway, since some controls may differ from those found on other motorcycles. This is especially important if riding a borrowed motorcycle.

### **Before beginning to ride:**

- Make all the pre-ride checks you would on any motorcycle (see pages 27-29) .
- Be familiar with all controls, such as the turn signals, horn, headlight switch, fuel control valve, and cut-off switch. Locate and operate these items without having to search for them.

- Operate all the controls before starting to ride. Know the gearshift pattern and operate the throttle, clutch and brakes a few times. Controls react differently on different motorcycles, and exact locations of controls may vary slightly. Additionally, some motorcycle conversions may be equipped with a single brake pedal or lever control, automatic clutch, or automatic transmission.
- At the beginning, start out slowly and carefully and be aware of the surroundings. Accelerate gently, take turns a little more slowly, and leave extra room for stopping.



# RIDER ABILITIES

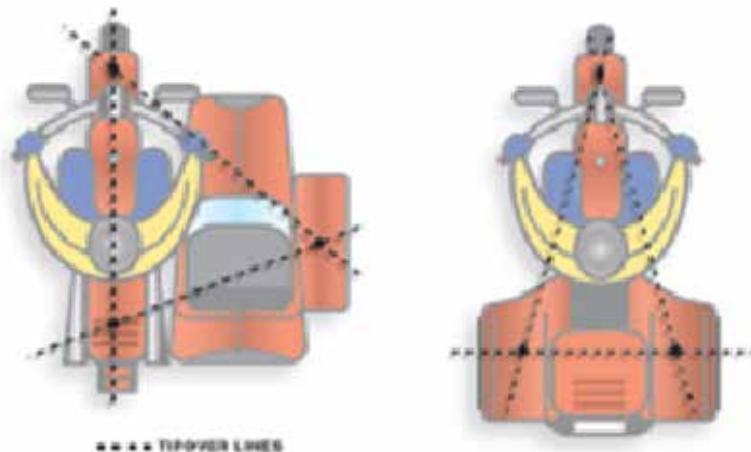
## BASIC MOTORCYCLE CONTROL

**Steering & Tip-over Lines** – Three-wheel motorcycles handle differently than two-wheeled motorcycles. With three wheels on the ground, they are naturally more stable than a two-wheel motorcycle. They also steer differently. Because conventional three-wheel motorcycles cannot lean, they cannot counter steer. Instead, the front wheel is pointed in the direction the rider wants the motorcycle to go.

Under some conditions during the operation of a three-wheel motorcycle, it is possible to have only two wheels in contact with the highway surface. This could occur during turning or tight turns whenever enough weight is transferred outside of the tip-over lines (see illustration).

This tendency requires careful load and passenger positioning inside the tip-over lines to help maintain maximum stability.

## TIP-OVER LINES



**Body Position** – As with any motorcycle, rider position is important for control and reducing or preventing fatigue. You should be able to reach both handgrips comfortably, since more handlebar movement is necessary than when riding a two-wheel motorcycle. While it is not necessary for the rider of a three-wheel motorcycle to move drastically during operation, shifting weight in the direction of the turn can improve control.

**Braking** – On a motorcycle with a sidecar, during braking in a sharp turn, the sidecar wheel may lift off the ground. Motorcycle and sidecar tires have limited traction or grip on the highway surface, and traction is greater when the motorcycle is rolling, not skidding or slipping. During turning, some of the available tire traction is used for cornering, so less is available for stopping. Thus, a skid can occur if you brake too hard.

**Turning** – The tendency of the rear inside wheel to lift during turning is greater with increased speed and tighter curves. During a turn, inertia causes the center of gravity of the motorcycle to shift sideways and outward toward the tip-over line. The reduced weight over the opposite side wheel can cause it to lift slightly.

The weight of a three-wheeled motorcycle (trikes and reverse trikes) is distributed almost equally between the two front or two rear wheels. These motorcycles handle the same in left and right hand turns.

**When Turning a Three-wheeled Motorcycle:**

- Approach a turn at speed with the head up, and look through the turn.
- Concentrate on pointing the front wheel(s) in the direction you want the motorcycle to go.
- Roll off the throttle before entering the turn.
- Apply the brakes enough to slow the motorcycle to a speed at which you can safely ride through the turn, then release the brakes before the turn.

- Slightly lean your upper body in the intended turn direction.
- Steer the front wheel/wheels toward the turn. Roll on the throttle to pull the motorcycle through the turn.

Because the center of gravity of a motorcycle with sidecar is close to the motorcycle itself, the behavior of the vehicle when turning right and when turning left is quite different.

During a right turn, cornering forces push the outfit to the outside of the turn resulting in a greater tendency for the sidecar wheel to lift. The lift will be greater if the sidecar is empty or lightly loaded.

### **When Turning Right on a Motorcycle With a Sidecar:**

- Anticipate the degree of turn required.
- Reduce speed before entering the curve by downshifting or braking.
- Shift your body weight over the sidecar and lean your upper body in the direction of the turn.
- Maintain speed as entering the curve.
- Accelerate gradually as exiting the curve.

During a left-hand turn, the sidecar acts as a stabilizer, so the sidecar wheel stays on the ground. However, if the turn is taken too sharply or at too high speed, there is a tendency for the motorcycle rear suspension to extend, and this may cause the rear wheel of the motorcycle to lift off the ground.

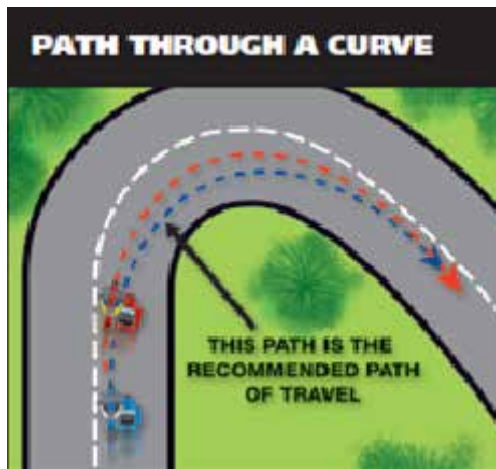
### **When Turning Left on a Motorcycle With a Sidecar:**

- Reduce speed prior to entering the turn.
- Apply more pressure on the rear brake than on the front brake.
- Lean the upper body in the direction intended to turn, and if necessary, shift your body weight.



**Cornering and Curves** – The cornering characteristics of a three-wheel motorcycle or motorcycle with a sidecar differ from those of a two-wheel motorcycle. Even with three wheels on the road, a sidecar can tip over if it is being turned too sharply or is going too fast for a corner. Therefore, it is best to always slow before entering a corner.

The best path to follow in the curve may not be the one that follows the curve of the highway. Following the center of the lane may actually increase the tip-over forces. Check opposing traffic carefully and, if safe, enter the curve toward the outside of your lane. This increases the line of sight through the curve and makes the turn less sharp. As you turn the motorcycle, move toward the inside of the curve and, as it passes the apex, move to the outside to exit, always remembering to stay in your lane.



**Hills** – When riding uphill on a three-wheel motorcycle or motorcycle with a sidecar, some weight will shift to the rear, causing the front of the motorcycle to become lighter.

This weight shift reduces the traction on the front tire/tires for steering and tire grip.

When riding downhill, gravity increases the amount of braking force required to slow or stop the motorcycle. It is important to begin slowing earlier for cornering and stopping.

**Lane Position** – The track of the dual wheels of a three-wheel motorcycle or motorcycle with a sidecar is almost the same width as some automobiles; therefore, they are limited in lane positioning. Keep toward the center of the lane to ensure the tracks of the dual wheels do not cross the painted lines into opposing traffic. Riding the motorcycle too far to the right could cause loss of traction if the tire leaves the pavement.

In spite of the extra width, you still have options for lane placement to maintain an escape route and space cushion. Adjust your position to your surroundings.

Lane positioning when riding three-wheeled motorcycles in groups is also an important consideration. You can still use a staggered formation (see page 74); however, there will not be as much of a space cushion to the side because of the added width. Always maintain a safe margin between all motorcycles.

**Parking at the Highway Side** – Because of the limitations on mobility and motorcycle length, it is not practical to park the motorcycle at a 90 degree angle with the rear wheel touching the curb, like with a two-wheel motorcycle. Position the motorcycle in a parking space so it is parked parallel to the curb. Some three-wheel motorcycles have reverse, so they can more easily get into a parking space designed for a vehicle. Parking parallel to the curb will facilitate pulling away from the curb and entering the lanes of traffic.

**Acceleration and Deceleration** – A three-wheel motorcycle with two drive wheels tends to be much more stable during acceleration and braking than a motorcycle with a sidecar. Attaching a sidecar to the motorcycle adds a non-powered, off-centered mass of weight.

During acceleration, the sidecar will feel as though it is lagging behind, causing the motorcycle to feel as though it is

being steered to the right. During deceleration or braking, the momentum of the sidecar continues to carry it forward, giving the feeling that the sidecar is trying to pass the motorcycle and makes the motorcycle feel as though it is being steered left.

On acceleration, compensate for this tendency by steering slightly in the opposite direction from the sidecar.

On deceleration, compensate for this tendency by steering slightly in the direction of the sidecar. Also pull in the clutch when braking.

**Swerving** – A quick stop may not always be sufficient to avoid an obstacle in the path of the motorcycle, even if you properly apply both brakes. Sometimes the only way to avoid a collision is to swerve. On a three-wheel motorcycle, it is two quick turns in rapid succession. Often, there is not much time to adjust your body position.

A three-wheel motorcycle or motorcycle with a sidecar is not as easy to swerve as a two-wheel motorcycle, and this is not typically the best option for hazard avoidance, so plan well ahead to avoid the need for swerving. If braking is needed, remember to brake then swerve or swerve then brake. Never brake while swerving.

## **CARRYING CARGO & PASSENGERS**

Three-wheel motorcycles are designed to carry passengers and cargo, but they still have a gross vehicle weight rating (GVW). Do not exceed the tire or motorcycle loading capacity rating. The extra weight could change the handling characteristics of the motorcycle, so give some thought to where the loads are positioned.

Many three-track motorcycles will have built-in storage compartments for cargo, either in front of, or behind, the rider.

On these motorcycles, center the load and keep it low in the storage areas, so it is positioned within the tip-over lines and balanced side-to-side. If carrying a passenger on a trike or reverse trike, have them sit directly behind you.

On a motorcycle with a sidecar, the best place for a passenger is in the sidecar. Never put a single passenger on the saddle; the added weight over the tip-over line will increase the instability of the motorcycle. While a second passenger can be carried on the seat behind the rider, the heavier passenger should always be in the sidecar.

The passenger sitting behind the motorcycle rider should sit upright at all times. It is not necessary for the passenger to lean into the curves.

When carrying loads in a sidecar, secure the load firmly in place to keep it from shifting and affecting the handling. Loads should be distributed toward the rear of the sidecar to reduce tipping of the nose of the sidecar in the event of a sudden left turn.

When loaded, you may find performance is reduced and stopping distances are longer, so allow a little extra distance.

The addition of a sidecar passenger will greatly improve stability, and right-hand turns can be made at a slightly higher speed. Turning left however will require more turning force.

# THREE-WHEEL MOTORCYCLE SKILLS TEST

Basic motorcycle control and obstacle-avoidance skills are included in the skills test to determine the motorcycle rider's ability to handle normal and hazardous traffic situations. At a minimum, the motorcycle rider will be tested for the ability to:

- Demonstrate overall vehicle control.
- Accelerate, brake, and turn safely.
- Stop, turn, and swerve quickly.
- Adjust motorcycle speed and position.

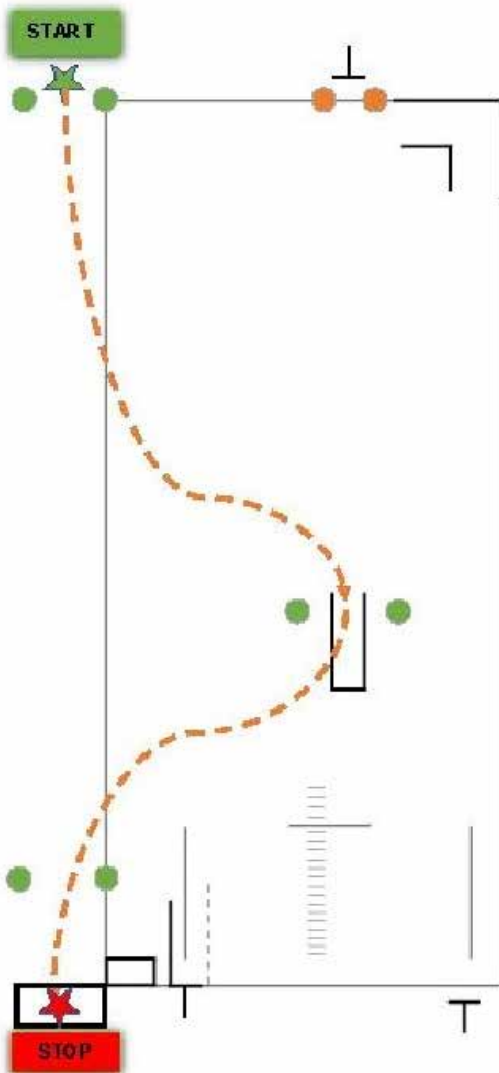
**Skills test examiners may score on factors related to safety such as:**

- Selecting safe speeds to perform the skills.
- Choosing the correct path and staying within boundaries.
- Completing normal and quick stops.
- Completing various turns and swerves.

Points will be deducted when the engine is stalled while attempting any of the skills. You will be graded on the ability to control the motorcycle, turn, stop quickly and ride the motorcycle in a straight line. The skills test examiner will also watch your posture and overall operation and attention. You may stop the skills test at any time. Do not attempt a skills test if not ready or comfortable doing it.

**If testing on a three-wheel vehicle (sidecar, trike, etc.) a three-wheel only restriction will be added to the endorsement on your driver's license.**

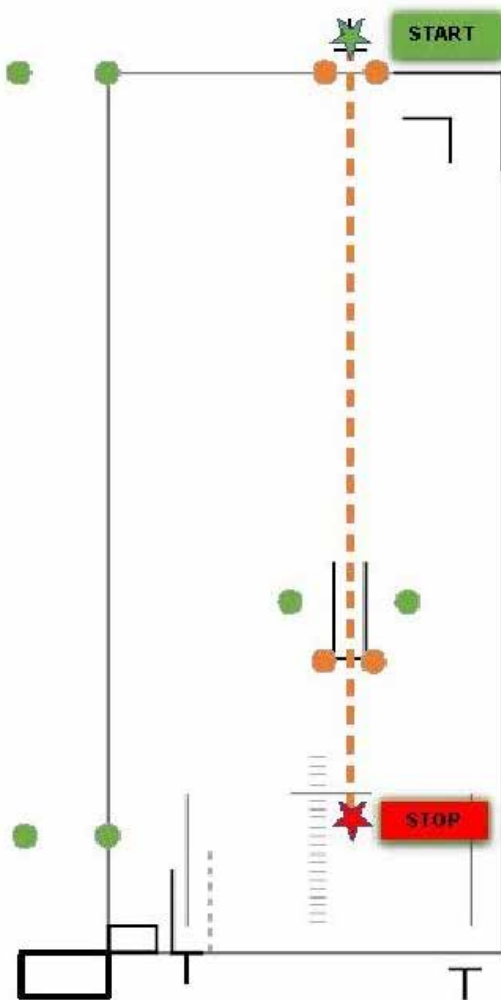
## Three-Wheel Motorcycle Skills Test



### CONE WEAVE & NORMAL STOP

Ride to the left of the first cone, through the center of the two sets of gate cones. Ride through the course without touching or skipping a cone or passing more than 4' from the cones.

After passing through the last gate cones, make a smooth, non-skidding stop with your front tire(s) inside that box. Your front tire(s) must not touch the painted lines.



## QUICK STOP

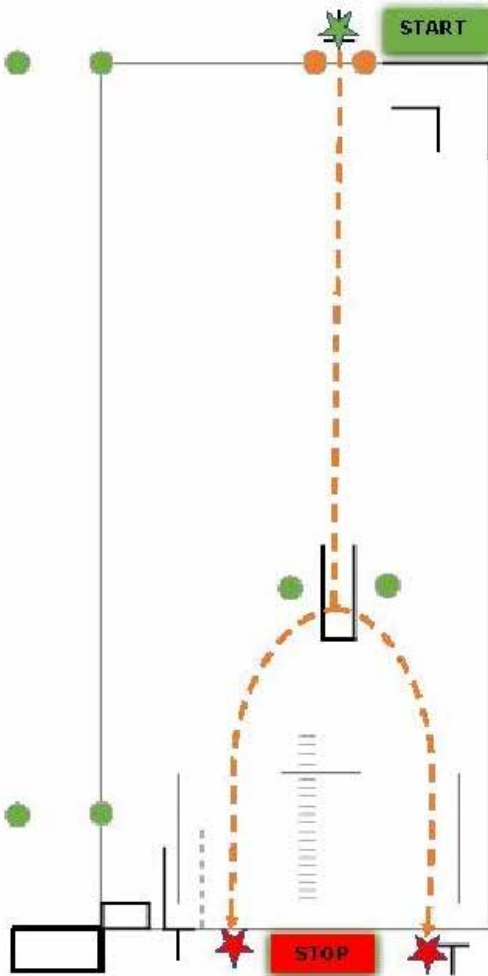
Position your motorcycle on that "T".

Once signaled, accelerate straight up this path. Stabilize your speed between 12-20 mph by the time you reach the first line.

Maintain a steady speed.

When your front tire(s) passes the second line, stop as fast as you safely can. You will not lose points if you skid.

Remain stopped until told to move.



## OBSTACLE SWERVE

Start at the "T".

Once signaled, accelerate straight up this path. Stabilize your speed between 12-20 mph by the time you reach the first line.


Maintain a steady speed.

When your front tire passes the second line, swerve to the (left or right, tester's choice).

Avoid the obstacle line and stay to the inside of the side line. Do not touch either line. Once past the side line, stop and wait for further instructions.



# MOTORCYCLE HAND SIGNALS

 <p><b>LEFT TURN</b> Arm and hand extending left, palm facing down</p>	 <p><b>RIGHT TURN</b> Arm out bent at 90° angle up with fist clinched</p>
 <p><b>SLOW DOWN</b> Arm extended straight out with palm facing down while swinging arm down</p>	 <p><b>SPEED UP</b> Arm extended straight out with palm facing up while swinging arm upward</p>
 <p><b>FOLLOW ME</b> Arm extended straight up with palm facing forward</p>	 <p><b>COME AROUND/ TAKE THE LEAD</b> Arm extended index finger pointing out while swinging arc from back to front</p>
 <p><b>SINGLE FILE</b> Arm straight up with index finger pointed up</p>	 <p><b>DOUBLE FILE</b> Arm straight up with index finger and middle finger up</p>
 <p><b>FUEL STOP</b> Point to fuel tank</p>	 <p><b>COMFORT STOP</b> Arm extended with clinched fist with short up and down motion</p>
 <p><b>STOP</b> Arm out bent at 90° angle down with palm facing back</p>	 <p><b>PULL OFF</b> Arm extended index finger pointing out while swinging arc from left to over head</p>
 <p><b>HAZARD IN ROAD</b> On left point with left hand On right point with right foot</p>	 <p><b>RIDE STAGGERED</b> Arm straight up with index finger and pinky up</p>

# MOTORCYCLE SKILLS TEST CHECK LIST

To bring all the required information for the motorcycle skills test, use this checklist to help prepare:

- I have made a skills test appointment.
- I have my valid driver's license.
- I have my valid motorcycle instruction permit.
- I have my helmet and eye protection.
- I will provide a motorcycle on which to take the skills test.

Basic safety equipment must be in working condition.

Motorcycle registration must be current, including the registration stickers on the license plate, or have a temporary registration.

- I have proof of valid and current insurance for the motorcycle on which I am taking the skills test.
- I have \$25.00 in cash to pay the skills test examiner.
- If under 21 years of age, I have my course completion certificate from an approved rider safety course.

**Riders under 18 will be required to have a parent or court-appointed guardian sign the application to add the motorcycle endorsement to their driver's license.**

# **TWO-WHEEL & THREE-WHEEL MOTORCYCLE PRACTICE KNOWLEDGE TEST**

*(The answers are printed at the bottom of the page 111.)*

- 1. It is MOST important to flash your brake light when:**
  - a. Someone is following too closely.**
  - b. You will be slowing suddenly.**
  - c. There is a stop sign ahead.**
  - d. Your signals are not working.**
  
- 2. The FRONT brake supplies how much of the potential stopping power?**
  - a. About 25%.**
  - b. About 50%.**
  - c. At least 70%.**
  
- 3. To swerve correctly:**
  - a. Shift your weight quickly.**
  - b. Turn the handlebars quickly.**
  - c. Press the handgrip in the direction of the turn.**
  - d. Press the handgrip in the opposite direction of the turn.**
  
- 4. If a tire goes flat while riding, it is usually best to:**
  - a. Relax on the handgrip.**
  - b. Shift your weight toward the good tire.**
  - c. Brake on the good tire and steer to the side of the highway.**
  
- 5. A vehicle is waiting to enter the intersection. It is best to:**
  - a. Make eye contact with the driver.**
  - b. Reduce speed and be ready to react.**
  - c. Speed up and be ready to react.**

**6. When riding with passengers, you should:**

- a. Start slowing sooner.
- b. Start in the center of the lane.
- c. Use only your front brake to slow.
- d. Never talk to them.

**7. When riding at night:**

- a. Always ride in the center lane.
- b. Ride with the flashers on.
- c. Follow closer to the vehicle ahead for safety.
- d. Wear reflective clothing.

**8. For greatest safety, your helmet should:**

- a. Fit loosely all the way around.
- b. Fit snugly all they way around.
- c. Fit tightly at the base; loosely at the top.
- d. Be worn only on long rides.

**9. When riding in traffic at night, the best way to locate bumps in the road is to:**

- a. Put your headlights on high beam.
- b. Read the road signs.
- c. Watch the taillights of the car ahead.
- d. Look over the cars ahead.

**10. Riding in the center lane position:**

- a. Keeps others from sharing your lane.
- b. Should be avoided at all costs.
- c. Is the safest place when approaching intersections.
- d. Keeps other drivers from seeing you.

# PROFESSIONAL TRAINING

Recent research into Idaho's fatal motorcycle crash data (2014-2018) revealed some startling findings:

- 77% were associated with rider error
- 69% were on cruisers or touring bikes
- 68% were over 40 years old
- 37% involved riders running off the highway in a corner
- 18% involved a vehicle violating the rider's right-of-way

The Idaho **STAR** Motorcycle Safety Program provides high quality rider training that makes motorcycling safer and more enjoyable for everyone.

**STAR** training is associated with a 79% reduced crash risk, and an 89% reduction in the risk of a fatal crash. STAR courses are taught by state-certified instructors who have the patience, understanding, training, and knowledge to help you develop the skills you need.

**Training for all Levels** – Whether you have ridden thousands of miles, or have never even sat on a motorcycle, Idaho STAR has a course to fit your needs. Increasing your knowledge and skill can help keep you out of the crash statistics.

**STAR** courses take place in a controlled, off-street environment and are designed to help you develop the physical skills as well as the mental strategies needed to successfully navigate today's highways and prevent crashes. Idaho STAR courses are held throughout the state during the riding season.

**Introduction to Riding** – This is the perfect course for folks who just want to see if motorcycling is for them or those who are especially nervous about riding and would like to ease into it at a slower pace. This 3-hour session covers motorcycle controls, starting, stopping, and balance. Class sizes are kept

low for lots of individual attention. Motorcycles and helmets are provided.

**Basic Rider Training** – Designed for the novice rider with no (or limited) street riding experience. During this 17-hour course, you will learn fundamental skills required to ride the motorcycle and progress to street-strategies and emergency situation skills. Motorcycles are provided in this course. Available with an online option for the classroom session.

**Intermediate Rider Training** – For riders who are already comfortable with the basic skills of turning, shifting, stopping, and balancing the motorcycle. This 9-hour course includes instruction in street-strategies and emergency situation skills. You will practice cornering, braking, and swerving maneuvers on the riding course. Ride one of our motorcycles or bring your own. Available with an online option for the classroom session.

**Enhanced Street Skills** – Designed for endorsed motorcycle riders with current street-riding experience. In this 6-hour course, you will improve your braking skills and build confidence in your ability to handle emergency braking situations on your own motorcycle. You will also improve your skills and build confidence in leaning and cornering on your own motorcycle.

**Enhanced Control Skills** – For endorsed riders with current street-riding experience. This 6-hour intensive on-cycle course is based on Idaho Police Motor School drills. You will have the opportunity to master precision vehicle control, advanced low-speed maneuvering, and hazard response skills on your own motorcycle.

**Enhanced 2-Up Skills** – For endorsed riders with current street-riding experience who want to build skill in carrying passengers. This 6-hour on-cycle course focuses on confidence-building exercises for handling emergency

braking situations, leaning, and cornering while carrying a passenger. Both rider and passenger receive individual and “team” coaching.

**Sidecar/Trike Courses (I and II)** – Designed for sidecar and trike riders with no experience (level I) and riders with at least three months of current street-riding experience (level II). In these courses, you will learn street strategies and hazard response skills, as well as practice cornering, braking, and swerving skills. We offer three-wheel training rigs for the level I courses. You bring your own to the Level II courses.

## **MOTORCYCLE ENDORSEMENTS**

Successful completion of STAR’s Basic or Intermediate Rider Training will waive the skills test portion of the motorcycle endorsement requirement.

Successful completion of one of the Sidecar/Trike courses will waive the skills test portion of a three-wheel only endorsement.

If you are under 21, state law requires completion of an approved motorcycle rider training course (Basic I, Basic II, or Experienced Course) before you can apply for a motorcycle endorsement.

The Idaho STAR Motorcycle Safety Program is incorporated within the Idaho Division of Career-Technical Education (CTE) and is operated by the College of Southern Idaho.

To learn more or to register for a class, go to [IdahoSTAR.org](http://IdahoSTAR.org) or call (208) 639-4540 or toll free at 888-280-STAR (7827).

**SEE THE IDAHO DRIVERS MANUAL FOR ADDITIONAL INFORMATION ON ALL OTHER TRAFFIC-RELATED LAWS SUCH AS TRAFFIC SIGNS, TRAFFIC LIGHTS, ETC.**

# SMART RIDER COMMITMENTS

The “Smart Rider Commitments” below are taken from the Idaho **STAR** Rider’s Guide.

We encourage you to review and consider making some (or all) of these commitments as a way to help you prevent and survive crashes and come home safely to your loved ones after every ride.

\_\_\_\_ (initial) “I acknowledge that part of being a responsible rider is knowing and following the ‘rules of the highway.’ I accept this fact and commit to learning and complying with state laws, rules, regulations and equipment requirements.”

\_\_\_\_ (initial) “I acknowledge that riding a motorcycle in a complex traffic and highway environment is an activity involving risk and danger. I accept this fact and commit to managing those risks.”

\_\_\_\_ (initial) “I acknowledge that when riding a motorcycle, the only thing between me and the elements (hot, cold, rain, hail, bugs, the asphalt, other vehicles, etc.) is the gear I am wearing. I accept this fact and commit to getting and wearing riding gear that is right for me and my family.”

\_\_\_\_ (initial) “I acknowledge that an expert rider is one who uses expert judgment to avoid having to use expert skills. I accept this fact and commit to becoming an expert rider by practicing SIPDE skills, keeping my eyes up and scanning 20 seconds ahead.”

\_\_\_\_ (initial) “I acknowledge that motorcyclists running wide in turns is the most common fatal crash situation. I accept this fact and commit to practicing good cornering skills, and in particular LOOKING through the turn and PRESSING forward on the handgrip to cause the bike to lean/turn.”

\_\_\_\_ (initial) “I acknowledge that braking errors are very common in crash situations. I accept this fact and commit to regularly practicing quick stops, with an emphasis on smooth increasing pressure on the front brake and a light to lighter application of the rear brake.”

\_\_\_\_ (initial) “I acknowledge that many fatal motorcycle crashes involve riders who had been drinking. I accept this fact and commit to separate the use of alcohol (and other drugs) from riding a motorcycle. I commit to riding sober.”

\_\_\_\_ (initial) “I acknowledge that when I carry a passenger, I am responsible for their safety and comfort. I accept this fact and commit to waiting to carry passengers until I have well developed skills and significant experience as a solo rider.”

\_\_\_\_ (initial) “I acknowledge that group riding demands more skill and attention than riding solo. I accept this fact and commit to waiting to ride with a group until I have well developed skills and significant experience riding by myself or with just one other (and more experienced) rider.”



# NOTES

# IDAHO

## MOTORCYCLE RIDER'S HANDBOOK



Visit us online at  
[dmv.idaho.gov](http://dmv.idaho.gov)

*Published by*  
Idaho Transportation Department

Division of Motor Vehicles  
P.O. Box 7129  
Boise, Idaho 83707-1129

**Phone:(208) 584-4343**