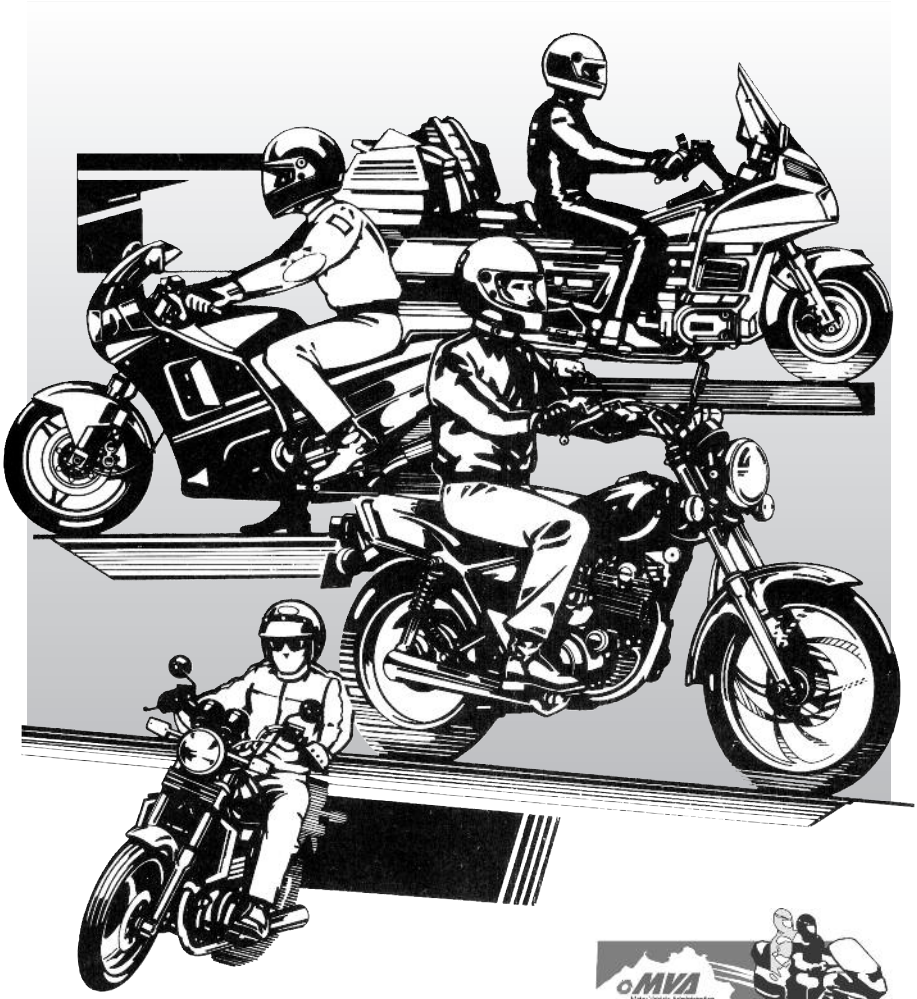
MVA

MOTORCYCLE
Operator Manual



MVA Motor Vehicle Administration
Maryland Motorcycle Safety Program

MESSAGE FROM THE MARYLAND MOTOR VEHICLE ADMINISTRATION

Operating a motorcycle safely in traffic requires special skills and knowledge. This handbook has been prepared by the MVA, with assistance from the Motorcycle Safety Foundation, to provide you with the information needed to enable you to obtain a motorcycle license and to help you learn those motorcycle operating skills and knowledge.

As you study this handbook, remember that your life, and the lives of others, will depend on what you do while operating a motorcycle. Riding a motorcycle can be safe and fun when you act as a responsible rider. When you ride a motorcycle, you should wear proper protective clothing and headgear, ride within your limits, obey the law and "share the road" with other highway users.

Ride safely and enjoy our wonderful State of Maryland and remember, don't drink and drive.

All motorcycle operator skills tests are by appointment only. To schedule an appointment visit our website at www.mva.maryland.gov.

For more information, please call:
410-768-7000 to speak with a customer service representative.
TTY for the Hearing Impaired: **1-800-492-4575**,
Or visit: **www.MVA.Maryland.gov**

LICENSING OF MARYLAND DRIVERS

Every driver of a motor vehicle must have a valid license. If you reside in Maryland and desire to drive a motor vehicle, you are required to have a valid Maryland driver's license. If you already have a valid non-commercial driver's license from another jurisdiction, you must obtain a Maryland license within 60 days of becoming a resident of this State. A commercial driver's license (CDL) holder must transfer their CDL within 30 days of moving to Maryland.

MOTORCYCLE LICENSING REQUIREMENT

Unlicensed or improperly licensed riders are over-represented in crash statistics. Operating a motorcycle without a valid Class M license may result in a fine, a suspension of your driver's license or license privilege, as well as points being added to your driving record and your motorcycle being towed away.

This manual provides the information needed to obtain a Class M motorcycle license. It is suggested that an applicant obtain and review the Maryland Driver's Manual, DL-002. If you have a valid Maryland license of another class; do not have a Maryland license; or if your license has expired over one (1) year, you will be required to pass a Class C Maryland knowledge test, in addition to the motorcycle examinations, to obtain a motorcycle license. Please obtain and review the Maryland Driver's Manual.

REQUIREMENT FOR APPLICANT UNDER 18 YEARS OF AGE

DRIVER EDUCATION

All applicants under 18 years of age and all new drivers regardless of age, must have satisfactorily completed an approved driver education course of not less than 30 hours classroom instruction and six (6) hours behind-the-wheel driver training if the motorcycle license is an applicant's first license, then the applicant must complete the provisions outlined under the Graduated Licensing System.

MOTORCYCLE SAFETY COURSE

Applicants under 18 years of age must also successfully complete an approved motorcycle safety course. These courses are provided at training centers operated by the Maryland Motorcycle Safety Program. The Motorcycle Safety Program's Basic Rider Course or Alternate Basic Rider Course are the approved courses for applicants under 18 years of age. The courses include classroom and "on the motorcycle" riding experience. Courses are conducted primarily between March and November of each year. Training motorcycles and some safety equipment are provided. Students who successfully complete an approved course receive a Completion Certificate to obtain a Class M License. For more information, log onto the Motorcycle Safety Program's website at www.mva.maryland.gov/MVA-Programs/moto/default.htm, or call the Program Office at 443-572-8236.

LICENSED IN ANOTHER JURISDICTION

If you have in your possession a driver's license issued to you by another state, or jurisdiction, you may exchange that license for a Maryland license. The license cannot be suspended, cancelled, or revoked. If it has been expired for more than one year you will have to retake all required tests. Military driving permits/licenses are not transferrable and must be accompanied by a state side license.

You must present proof of age, identity, lawful status, verifiable social security number or proof of ineligibility for a social security number, Maryland residence and current license. You take all the required tests and finally, surrender all out-of-state driver licenses before obtaining a Maryland Driver's License.

If you cannot present a previously issued license, you must do one of the following:

- Obtain and submit a certified driving record (less than 30 days old) from the jurisdiction in which you are currently, or were previously licensed, indicating your name, DOB, license number, license class or classes/endorsements, issue and expiration dates of the license as well as your current status; or
- Apply for and obtain a Maryland Learner's Permit.

If you have a license issued by another country, please visit the MVA's website for additional information.

If you are under 18 years of age, you are required to show a completion certificate from a motorcycle safety program course, even if you already have a valid motorcycle license from another jurisdiction, before you can obtain a Maryland motorcycle license.

LEARNER'S PERMIT

You may only drive those vehicles and combination of vehicles specified on your Learner's Permit and then only while you are accompanied by, and under the immediate supervision of, a person who:

- Who is at least 21 years old and has had a motorcycle license for at least three (3) years as stated above.
- Has been licensed for at least three (3) years, in this state or in another state, to drive vehicles of the class then being driven by the holder of the Learner's Permit; and
- Is a licensed motorcycle operator who is at least 21 years of age and has three (3) years experience driving a motorcycle. Motorcycle learners shall carry, only as a passenger, a licensed motorcycle driver who is at least 21 years old and has had a motorcycle license for at least three (3) years.

Immediate supervision for a motorcycle instructional permit holder is defined as being in the vicinity of the motorcycle being operated in a capacity to assist and protect the learning driver. The supervising driver may be a passenger on the motorcycle, if properly licensed with a motorcycle license on another motorcycle, on foot, or in another vehicle within safe traveling distance.

THE LICENSING TEST

THE TESTS

The required examinations include a test of the applicant's:

- Vision – A minimum visual acuity of 20/40 in each eye, a field of vision of at least 140 degrees, and binocular vision is required for an unrestricted license. If the applicant's vision can be corrected by glasses or contact lenses to meet these requirements, the Learner's Permit or license issued will be restricted to "corrective lenses" requiring the holder to wear glasses or contact lenses while driving a motor vehicle;
- Ability to Read Road Signs – You must be able to read and explain all highway signs, in English, shown to you and observe all signs during the driving test;
- Written Examination – This test is designed to check your knowledge of traffic laws, rules of the road, motor vehicle law and safe driving practices. The information you will be tested on is in this handbook. The questions are multiple choice. Applicants who experience problems due to speech, hearing, language, or reading difficulty, should contact the MVA's Customer Service Center at 410-768-7000 for assistance (1-800-492-4575 for TTY);
- Driving Test – An actual demonstration of skills needed to exercise ordinary and reasonable control in the operation of a motorcycle. A motorcycle used for testing must be properly registered with license plate properly displayed.

If you fail any portion of the test, you may retake a second test the next day if an appointment is available. If you fail the second or subsequent test, you must wait at least seven (7) calendar days before a new test can be taken. Testing is scheduled by appointment only.

A driving test will not be conducted using a vehicle with defective equipment or if the applicant is not wearing approved eye protection and helmet.

THE SKILL TEST

During this test, you will demonstrate the skills needed to safely operate a motorcycle in traffic. There is a separate test for two and three-wheeled motorcycles. The test includes:

For a two-wheeled motorcycle:

- Left "U" Turn;
- Sharp Right Turn From a Stop;
- Cone Weave;
- Normal Stop;
- Quick Stop;
- Obstacle Swerve; and
- Overall control of the motorcycle.

For a three-wheeled motorcycle:

- Sharp Left Turn;
- Normal Stop;
- Cone Weave;
- Sharp Right Turn From a Stop;
- Quick Stop;
- Obstacle Swerve; and
- Overall control of the motorcycle.

NOTE: An applicant who passes the test on a three-wheeled motorcycle will receive a restricted license limiting them to the operation of the type of motorcycle used for testing.

If you accumulate (11) eleven or more points, you have failed the test. The Examiner is required to end the test when the applicant:

- Accumulates 11 or more points;
- Stalls the engine four times;
- Falls or drops the motorcycle (for 2-wheelers);
- Excessively tips or loses control (3-wheelers);
- Commits an unsafe act or disregards the instructions; and
- Violates a Traffic Regulation.

TRANSPORTING A MOTORCYCLE TO A TEST LOCATION

The holder of a motorcycle learner's permit may transport a motorcycle to the driving test location by truck or other vehicle unaccompanied by another individual if the holder of the learner's permit is licensed to drive the vehicle used to transport the motorcycle. A motorcycle transported on another vehicle must remain on the transporting vehicle until an examiner authorizes its removal.

An applicant driving the motorcycle to the driving test must be accompanied by a person properly licensed to drive a motorcycle who is at least 21 years old and has held a motorcycle license for three (3) years or more.

A younger or less experienced holder of a motorcycle license may drive the motorcycle to the examination station and to the starting point where the examiner begins the driving test.

MOTORCYCLE EQUIPMENT

Your motorcycle must be equipped with two (2) brakes, at least one (1) headlight, one (1) rear red light, one (1) brake actuated red stop light, one (1) white rear light illuminating the license plate, a horn, two (2) mirrors, two (2) unaltered fenders, two (2) foot rests for the operator and two (2) retractable foot rests for a passenger.

The mirrors shall be factory equipment or equivalent, and may not contain sharp edges, projections or irregular indents capable of producing injury.

Rearview mirrors are one of the most important pieces of equipment on a motorcycle. The reflective surface of the mirror shall be of a size not less than seven (7) square inches allowing you to see part of the lane behind you and part of the lane next to you. Convex mirrors allow you to see the road in your immediate area in more detail, but they make the vehicles behind you look farther away than they really are.



REQUIRED OPERATOR EQUIPMENT

No person shall operate or ride a motorcycle unless they are wearing protective headgear which complies with the standards established by the Motor Vehicle Administration. The Federal Motor Vehicle Safety Standard (FMVSS), 218 Motorcycle Helmets, is adopted as the minimum standard for helmets required to be worn by operators and passengers on motorcycles. The Administration shall accept all helmets which comply with the requirements of FMVSS 218, motorcycle helmets, 49 CFR 571.281. Helmets bearing a factory applied (DOT) Department of Transportation label and/or Snell Memorial Foundation meet those standards. If the DOT label is missing, a compliant helmet will also have a label either sewn into the comfort line or affixed to the liner that indicates the month and year the helmet was manufactured.

No person shall operate or ride a motorcycle unless they are wearing an eye protection device approved by the Administration.

All face shields, goggles, prescription lenses and "over the counter" glasses must comply with the Federal Food and Drug Administration regulations on impact resistance.

If the motorcycle is equipped with a windscreen, if must be securely fastened to the motorcycle. If the operator is not wearing an approved eye protection device, the windscreen must be mounted at a proper height to protect the operator's face and eyes when the operator is seated on the motorcycle in a normal riding position. It is recommended that the operator wear an approved eye protection device even though the motorcycle is equipped with a windscreen.

THE MARYLAND MOTORCYCLE SAFETY PROGRAM

The purpose of the Motor Vehicle Administration's Motorcycle Safety Program is to improve the safety of motorcyclists through rider education and a public awareness effort that benefits all highway users. The Program operates training centers throughout the state that conduct rider training courses for new and experienced riders through which an individual can earn a Class M license.

The Basic Rider Course (BRC) is designed for the new rider. The course includes seven (7) hours of classroom sessions and approximately ten (10) hours of "on motorcycle" practice. Participants learn the basic operating skills, street strategies and accident avoidance skills. Training motorcycles are provided. The Alternate Basic Rider Course (ABRC) is a seven-hour course for the individual who has experience with operating a motorcycle and may have a learner's permit. Training motorcycles are provided but a participant can use their own motorcycle if transported to the training center legally. Students who meet the knowledge and skill test licensing standards in either BRC or ABRC may receive a licensing completion certificate and can take it to any full service MVA office to obtain a motorcycle (Class M) license without additional skills testing.

For more information log onto the Motorcycle Safety Program's website at www.mva.maryland.gov/MVA-Programs/moto/default.htm, or call the Program Office at 443-572-8236. Individuals under 18 years of age are required to successfully complete a motorcycle safety course prior to obtaining a motorcycle license. To take a course, you must be eligible to apply for a learner's permit, however, the permit is not required to enroll in the course.

DRIVER'S EDUCATION COURSE

Applicants who have never had a license in any state, must successfully complete the Driver's Education Course consisting of thirty (30) hours of classroom and six (6) hours of behind-the-wheel driving instruction.

ROADWAY SAFETY DRIVING EDUCATION PROGRAM

Applicants who have an out-of-country license must also successfully complete the 3-Hour Roadway Safety Driving Education Program.

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PREPARING TO RIDE

What you do before you start a trip goes a long way toward determining whether or not you'll get where you want to go safely. Before taking off on any trip, a safe rider makes a point to:

1. **Wear the right gear.**
2. **Become familiar with the motorcycle.**
3. **Check the motorcycle equipment.**
4. **Be a responsible rider.**

WEAR THE RIGHT GEAR

When you ride, your gear is "right" if it protects you. In any crash, you have a far better chance of avoiding serious injury if you wear:

- **A DOT Certified helmet.**
- **Face or eye protection.**
- **Protective clothing.**

Helmet Use

Crashes are not rare events — particularly among beginning riders. One out of every five motorcycle crashes results in head or neck injuries. Head injuries are just as severe as neck injuries – and far more common. Crash analyses show that head and neck injuries account for a majority of serious and fatal injuries to motorcyclists. Research also shows that, with few exceptions, head and neck injuries are reduced by the proper wearing of a DOT certified helmet.

Some riders don't wear helmets because they think helmets will limit their view to the sides. Others wear helmets only on long trips or when riding at high speeds. Here are some facts to consider:

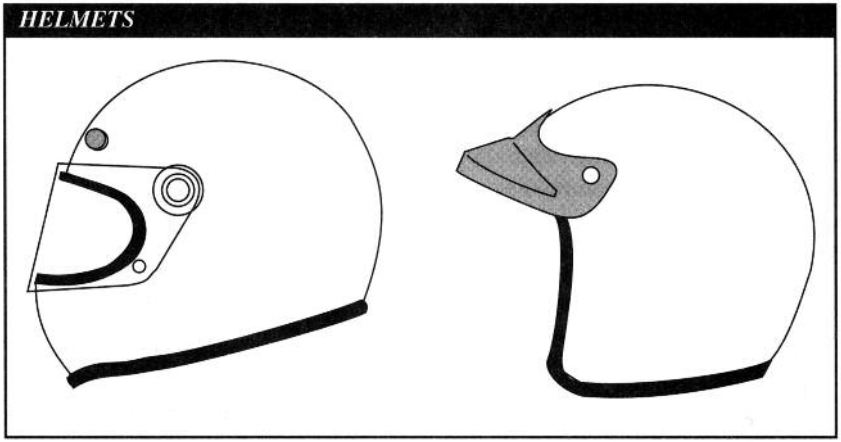
- **A DOT certified helmet** lets you see as far to the sides as necessary. A study of more than 900 motorcycle crashes, where 40% of the riders wore helmets, did not find even one case in which a helmet kept a rider from spotting danger.
- **Most crashes happen** on short trips (less than five miles long), just a few minutes after starting out.
- **Most riders** are riding slower than 30 mph when a crash occurs. At these speeds, helmets can cut both the number and severity of head injuries by half.

No matter what the speed, helmeted riders are three times more likely to survive head injuries than those not wearing helmets at the time of the crash.

Helmet Selection

There are two primary types of helmets, providing two different levels of coverage: full face and open face, also known as the three-quarter.

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



- **Is certified to meet U.S.** Department of Transportation (DOT) standards. (Helmets with a label from the Snell Memorial Foundation give you an added assurance of quality.)
- **Fits snugly**, all the way around.
- **Has no obvious defects** such as cracks, loose padding or frayed straps.

Whatever helmet you decide on, keep it securely fastened on your head when you ride. Otherwise, if you are involved in a crash, it's likely to fly off your head before it gets a chance to protect you.

Eye and Face Protection

A plastic shatter-resistant faceshield can help protect your whole face in a crash. It also protects you from wind, dust, dirt, rain, insects, and pebbles thrown up from cars ahead. These problems are distracting and can be painful. If you have to deal with them, you can't devote your full attention to the road.

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

To be effective, eye or faceshield protection must:

- **Be free** of scratches.
- **Be resistant** to penetration.
- **Give a clear view** to either side.
- **Fasten securely**, so it does not blow off.
- **Permit air to pass** through, to reduce fogging.
- **Permit enough room** for eyeglasses or sunglasses, if needed.

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

Personal Protective Equipment (PPE)

Street clothes may not be suitable for the riding environment. Select PPE that is designed for motorcycling. Not only will it protect you in a crash, it will also provide comfort and protection from heat, cold, flying debris and hot and moving parts of the motorcycle.

- **Jacket and pants** should cover arms and legs completely. They should fit snugly enough to keep from flapping or ballooning in the wind, yet loosely enough to allow freedom of movement. Leather offers the most protection, but sturdy synthetic "textile" materials also offer excellent protection with reduced weight. You should wear a jacket even in warm weather to prevent dehydration. Textile jackets are designed to protect without getting you overheated even during the summer.
- **Boots** should be sturdy, extended above your ankles and provide support when you put your feet down at a stop and when supporting the motorcycle. They should have low heels and soles made of a hard non-slip material. Be sure to tuck laces in so they won't catch on your motorcycle.
- **Gloves** provide you a better grip on the handlebars and provide some protection in a crash. Gloves should be full-fingered and made of leather, or similar durable material.

In cold or wet weather, your PPE should keep you warm and dry, as well as protect you from injury. You cannot control a motorcycle well if you are numb. Riding for long periods in cold weather can cause severe chill and fatigue. A winter jacket should resist wind and fit snugly at the neck, wrists, and waist. Good-quality rainsuits designed for motorcycle riding resist tearing apart or ballooning up at high speeds.

The Right Motorcycle for You

First, make sure your motorcycle "fits" you. When seated on the motorcycle, your feet should reach and, preferably, be flat on the ground with your legs slightly bent at the knee. You should be able to reach the handlebars and turn them lock-to-lock without having to stretch forward or lock your arms.

KNOW YOUR MOTORCYCLE

There are plenty of things on the highway that can cause you trouble. Your motorcycle should not be one of them. To make sure that your motorcycle won't let you down:

- **Read** the owner's manual first.
- **Be familiar** with the motorcycle controls.
- **Check** the motorcycle before every ride.
- **Keep** it in safe riding condition between rides.

1 ***Test Yourself***

A plastic shatter-resistant face shield:

A. Is not necessary if you have a windshield.
B. Only protects our eyes.
C. Helps protect your whole face.
D. Does not protect your face as well as goggles.

Answer - page 38

- **Avoid** add-on's and modifications that make your motorcycle harder to handle.

At minimum, your street-legal motorcycle should have:

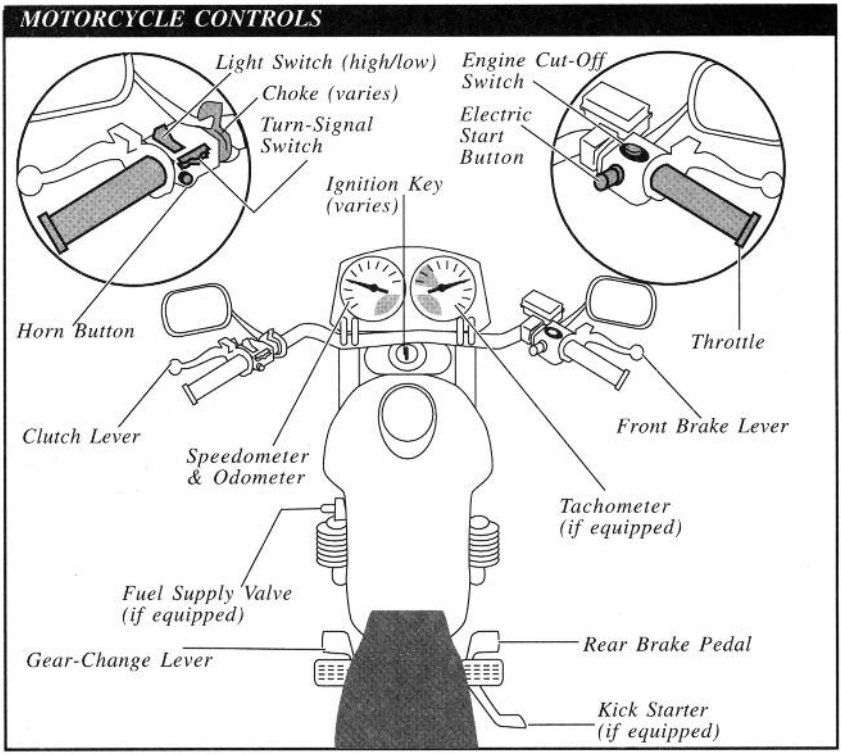
- **Headlight, taillight and brakelight**.
- **Front and rear brakes**.
- **Turn signals**.
- **Horn**.
- **Two mirrors**.

Borrowing and Lending

Borrowers and lenders of motorcycles, beware. Crashes are fairly common among beginning riders – especially in the first months of riding. Riding an unfamiliar motorcycle adds to the problem. If you borrow a motorcycle, get familiar with it in a controlled area. And if you lend your motorcycle to friends, make sure they are licensed and know how to ride before allowing them out into traffic. No matter how experienced you may be, ride extra carefully on any motorcycle that's new or unfamiliar to you. More than half of all crashes occur on motorcycles ridden by the operator for less than six months.

Get Familiar with the Motorcycle Controls

Make sure you are completely familiar with the motorcycle before you take it out on the street. Be sure to review the owner's manual. This is particularly important if you are riding a borrowed motorcycle. If you are going to use an unfamiliar motorcycle:



- **Make all the checks** you would on your own motorcycle.
- **Find out where everthing is**, particularly the turn signals, horn, headlight switch, fuel-control valve, and engine cut-off switch. Find and operate these items without having to look for them.
- **Know the gear pattern**. Work the throttle, clutch, and brakes a few times before you start riding. All controls react a little differently.
- **Ride very cautiously** and be aware of surroundings. Accelerate gently, take turns more slowly, and leave extra room for stopping.

Check Your Motorcycle

A motorcycle needs more frequent attention than a car. A minor technical failure in a car seldom leads to anything more than an inconvenience for the driver.

If something's wrong with the motorcycle, you'll want to find out about it before you get in traffic. Make a complete check of your motorcycle before every ride.

Before mounting the motorcycle make the following checks:

- **Tires**—Check the air pressure, general wear and tread.
- **Fluids**—Oil and fluid levels. At a minimum, check hydraulic fluids and coolants weekly. Look under the motorcycle for signs of an oil or gas leak.
- **Headlights and Taillight**—Check them both. Test your switch to make sure both high and low beams are working.
- **Turn Signals**—Turn on both right and left turn signals. Make sure all lights are working properly.
- **Brake Light**—Try both brake controls, and make sure each one turns on the brake light.

Once you have mounted the motorcycle, complete the following checks before starting out:

- **Clutch and Throttle—**Make sure they work smoothly. The throttle should snap back when you let go. The clutch should feel tight and smooth.
- **Mirrors**—Clean and adjust both mirrors before starting. It's difficult to ride with one hand while you try to adjust a mirror. Adjust each mirror so you can see the lane behind and as much as possible of the lane next to you. When properly adjusted, a mirror may show the edge of your arm or shoulder—but it's the road behind and to the side that's most important.
- **Brakes**—Try the front and rear brake levers one at a time. Make sure each one feels firm and holds the motorcycle when the brake is fully applied.

2 ***Test Yourself***

More than half of all crashes:

A. Occur at speeds greater than 35 mph.

B. Happen at night.

C. Are caused by worn tires.

D. Involve riders who have ridden their motorcycles less than six months.

Answer - page 38

- **Horn**—Try the horn. Make sure it works.

In addition to the checks you should make before every trip, check the following items at least once a week: Wheels, cables, fasteners, and fluid checks. Follow your owner's manual to get recommendations.

KNOW YOUR RESPONSIBILITIES

"Accident" implies an unforeseen event that occurs without anyone's fault or negligence. Most often in traffic, that is not the case. In fact, most people involved in a crash can usually claim some responsibility for what takes place.

Consider a situation where someone decides to try to squeeze through an intersection on a yellow light turning red. Your light turns green. You pull into the intersection without checking for possible latecomers. That is all it takes for the two of you to tangle. It was the driver's responsibility to stop. And it was your responsibility to look before pulling out. Neither of you held up your end of the deal. Just because someone else is the first to start the chain of events leading to a crash, doesn't leave any of us free of responsibility.

As a rider you can't be sure that other operators will see you or yield the right of way. To lessen your chances of a crash occurring:

- **Be visible**—wear proper clothing, use your headlight, ride 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**—following, being followed, passing and being passed.
- **Scan your path** of travel 12 seconds ahead.
- **Identify and separate** multiple hazards.
- **Be prepared to act**—remain alert and know how to carry out proper crash-avoidance skills.

Blame doesn't matter when someone is injured in a crash. There is rarely a single cause of any crash. The ability to ride aware, make critical decisions, and carry them out separates responsible riders from all the rest. Remember, it is up to you to keep from being the cause of, or an unprepared participant in, any crash.

RIDE WITHIN YOUR ABILITIES

This manual cannot teach you how to control direction, speed, or balance. That's something you can learn only through practice. But control begins with knowing your abilities and riding within them, along with knowing and obeying the rules of the road.

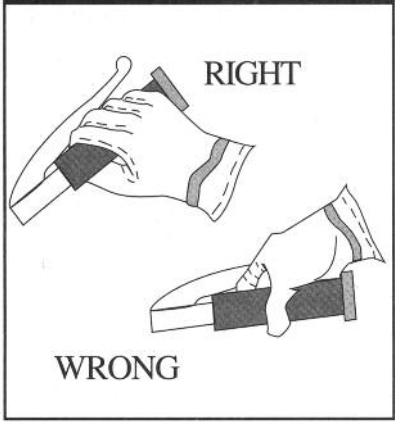
BASIC VEHICLE CONTROL

Body Position

To control a motorcycle well:

- **Posture**—Sit so you can use your arms to steer the motorcycle rather than to hold yourself up.
- **Seat**—Sit far enough forward so that arms are slightly bent when you hold the handlegrips. Bending your arms permits you to press on the handlebars without having to stretch.
- **Hands**—Hold the handle grips firmly to keep your grip over rough surfaces. Start with your wrist down and knuckles up on the throttle. This will help you keep from accidentally using too much throttle. Also, adjust the handlebars so your hands are even with or below your elbows. This permits you to use the proper muscles for precision steering.
- **Knees**—Keep your knees against the gas tank to help you keep your balance as the motorcycle turns.
- **Feet**—Keep your feet firmly on the footpegs to maintain balance. Don't drag your feet. If your foot catches on something, you can be injured and it could affect your control of the motorcycle. Keep your feet near the controls so you can get to them fast if needed. Also, don't let your toes point downward—they may get caught between the road and the foot pegs.

HOLDING HANDLEGRIPS



Shifting Gears

There is more to shifting gears than simply getting the motorcycle to pick up speed smoothly. Learning to use the gears when downshifting, turning, or starting on hills is important for safe motorcycle operation.

Shift down through the gears with the clutch as you slow or stop. Remain in first gear while you are stopped so that you can move out quickly if you need to.

Make certain you are riding slowly enough when you shift 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. Work towards a

smooth, even 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.

Braking

On most motorcycles, the brakes on the front and rear wheels are controlled independently. You should always use both brakes when stopping. The front brake is more powerful and provides up to *three-quarters* of your total stopping power. The front brake is safe to use if used properly.

- **Use both brakes** *every time* you slow or stop. Using both brakes for even "normal" stops will permit you to develop the habit or skill of using both brakes in an emergency. Apply the front brake using a firm progressive squeeze with all four fingers on the lever and press down on the rear brake pedal. The more you squeeze on the front brake lever, the less pressure is applied to the rear brake pedal. Grabbing the front brake, or stomping on the rear brake can cause the brakes to lock, resulting in a loss of control.
- **If you know the technique**, using both brakes in a turn is possible, although, it should be done very carefully. When a motorcycle leans, some of the traction is used for turning and less traction is available for braking. A skid could occur if you apply too much brake. Also, using the brakes on a slippery surface can be hazardous. Use caution and apply the brakes gently where traction is reduced.
- **Some motorcycles** may have integrated, ABS or linked braking system. Consult your owner's manual to see if your motorcycle has one of these systems and for a detailed explanation on its operation and effective use.

Turning

Most single-vehicle motorcycle crashes happen in turns and too much speed is usually the cause. A rider will either cross into another lane of traffic, or run off the road. Too often, a rider will over-react and brake too hard, causing a skid, loss of control and a low side fall. Approach turns and curves with caution.

Use the following four steps to safely execute turns:

- **SLOW**
- **LOOK**
- **PRESS**
- **ROLL**

SLOW—Reduce speed by closing the throttle and/or using the brakes. All braking should be done before leaning the motorcycle.

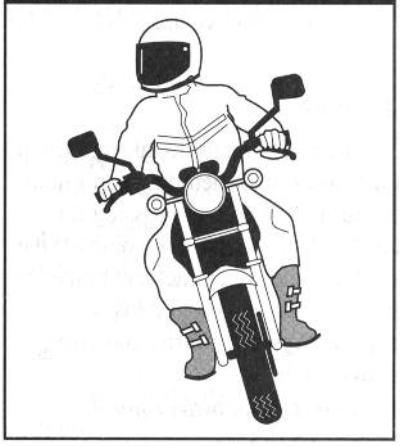
LOOK—Look through the turn to where you want to go. Turn just your head, not your shoulders, and keep your eyes level with the horizon.

PRESS—To turn, the motorcycle must lean. To lean the motorcycle, press on the handgrip in the direction of the turn. Press the left—lean left—go left. Press right—lean right—go right (counter steering). Higher speeds and/or tighter turns require the motorcycle to lean more.

ROLL—Roll on the throttle through the turn to stabilize suspension. Maintain steady speed or accelerate gradually through the turn. This will help keep the motorcycle stable.

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

NORMAL TURNING



In slow turns, counterbalance by leaning the motorcycle only and kepping your body straight. Shift your weight to the outside peg.

SLOW TURNING



3 Test Yourself

When riding, you should:

A. Turn your head and shoulders to look through turns.

B. Keep your arms straight.

C. Keep your knees away from the gas tank.

D. Turn just your head and eyes to look where you are going.

Answer - page 38

KEEPING YOUR DISTANCE

The best protection you can have is distance—a "cushion of space"—all around your motorcycle. If someone else makes a mistake, distance permits you:

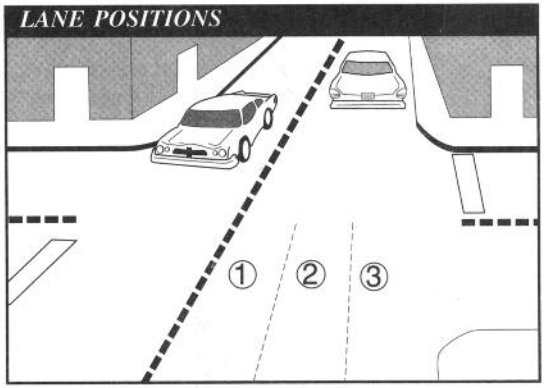
- **Time to react**.
- **Space to maneuver**.

Lane Positions

In some ways the size of the motorcycle can work to your advantage. Each traffic lane gives a motorcycle three paths of travel, as indicated in the illustration.

Your lane position should:

- **Increase** your ability to see and be seen.
- **Avoid** others' blind spots.
- **Avoid** surface hazards.
- **Protect** your lane from other drivers.
- **Communicate** your intentions.
- **Avoid** wind blast from other vehicles.
- **Provide** an alternate path of travel.



Select the appropriate path to maximize your space cushion and make yourself more easily seen by others on the road.

In general, there is no single best position for riders to be seen and to maintain a space cushion around the motorcycle. No portion of the lane need be avoided—including the center.

Position yourself in the portion of the lane where you are most likely to be seen and you can maintain a space cushion around you. Change position as traffic situations change. Ride in path 2 or 3 if vehicles and other potential problems are on your left only. Remain in path 1 or 2 if hazards are on your right only. If vehicles are being operated on both sides of you, the center of the lane, path 2, is usually your best option.

The oily strip in the center portion that collects drippings from cars is usually no more than two feet wide. Unless the road is wet, the average center strip permits adequate traction to ride on safely. You can operate to the left or right of the 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 intersection or tollbooths.

Following Another Vehicle

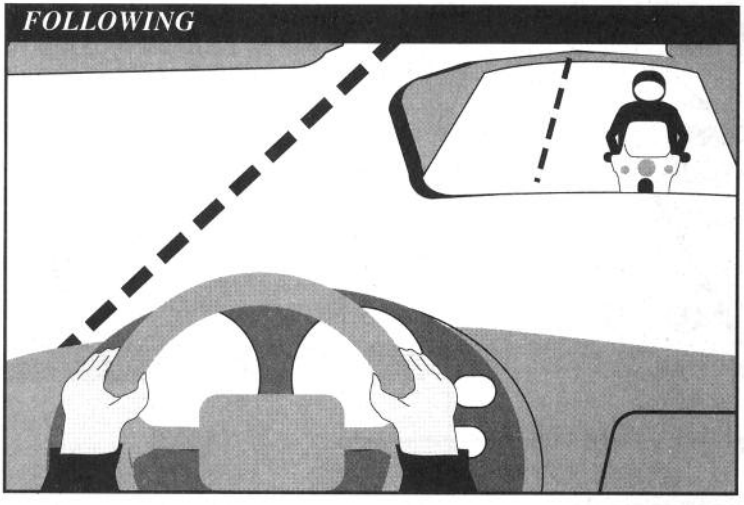
"Following too closely" is a major factor in crashes involving motorcyclists. In traffic, motorcycles need as much distance to stop as cars. Normally, *a minimum of two-seconds* distance should be maintained behind the vehicle ahead.

To gauge your following distance:

- **Pick out a marker**, such as a pavement marking or lamppost, on or near the road ahead.
- **When the rear bumper** of the vehicle ahead passes the marker, count off the seconds: "one-thousand-one, one-thousand-two."
- **If you reach the marker** before you reach "two," you are following too closely.

The two-second following distance allows for reaction time. Allow four or more seconds to stop or swerve if the driver ahead should stop suddenly.

A larger cushion of space is needed if your motorcycle will take longer than normal to stop. If the pavement is slippery, if you cannot see through the vehicle ahead, or if traffic is heavy and someone may



squeeze in front of you, open up a three second or more following distance.

Keep well behind the vehicle ahead even when you are 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 behind a car, ride where the driver can see you in the rearview mirror. Riding in the center portion of the lane should put your image in the middle of the rearview mirror—where a driver is most likely to see you.

Riding at the far side of a lane may permit a driver to see you in a sideview mirror. But remember that most drivers don't look at their sideview mirrors nearly as often as they check the rearview mirror. If the traffic situation allows, the center portion of the lane is usually the best place for you to be seen by the drivers ahead and to prevent lane sharing by the others.

Being Followed

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

A better way to handle tailgaters is to get them in front of you. When someone is following too closely, change lanes and let them pass. If you can't do this, slow down and open up extra space ahead of you to allow room for both you and the tailgater to stop. This will also encourage them to pass. If they don't pass, you will have given yourself and the tailgater more time and space to react in case an emergency does develop ahead.

Passing and Being Passed

Passing and being passed by another vehicle is not much different than with a car. However, visibility is more critical. Be sure other drivers see you, and that you 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 you more visible. Signal and check for oncoming traffic. Use your mirrors and turn your head to look for traffic behind.
2. **When safe**, move into the left lane and accelerate. Select a lane position that doesn't crowd the car you are passing and provides space to avoid hazards in your lane.
3. **Ride through the blind spot** as quickly as possible.
4. **Signal again**, and complete mirror and head checks before returning to your original lane and then cancel signal.

Remember, passes must be completed within posted speed limits, and only where permitted. Know your signs and road markings!

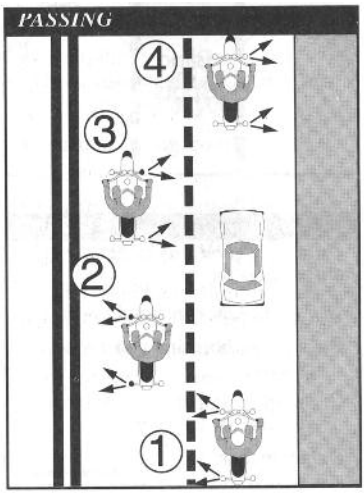
Being Passed

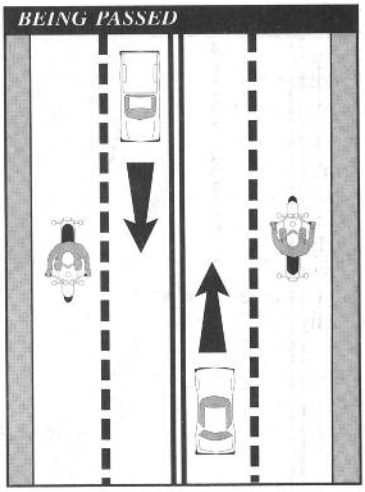
When you are being passed from behind or by an oncoming vehicle, stay in the center portion of your lane. Riding any closer to them could put you in a hazardous situation.

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 you're there, a passenger may not see you and might toss something on you or the road ahead of you.
- **Blasts of wind from larger vehicles**—They can affect your control. You have more room for error if you are in the middle portion when you are hit by this blast than if you are on either side of the lane.

Do not move into the portion of the lane farthest from the passing vehicle. It might invite the other driver to cut back into your lane too early.





Lane Sharing

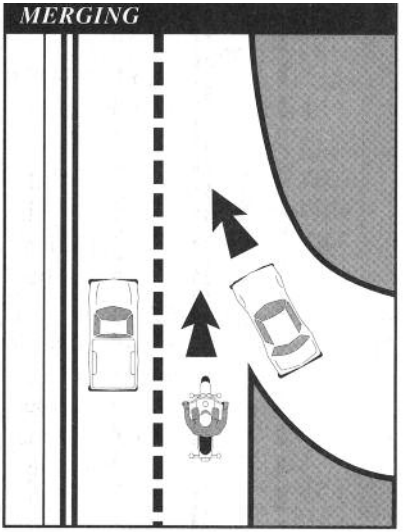
Cars and motorcycles need a full lane to operate safely. Lane sharing is prohibited in Maryland.

Riding between rows of stopped or moving cars in the same lane can leave you vulnerable to the unexpected. A hand could come out of the window; a door could open; a car could turn suddenly. Discourage lane sharing by others by protecting your lane. Keep a center-portion position whenever drivers might be tempted to squeeze by you. Drivers are most tempted to do this:

- **In heavy**, bumper-to-bumper traffic.
- **When they** want to pass you.
- **When you** are preparing to turn at an intersection.
- **When you** are getting in an exit lane or leaving a highway.

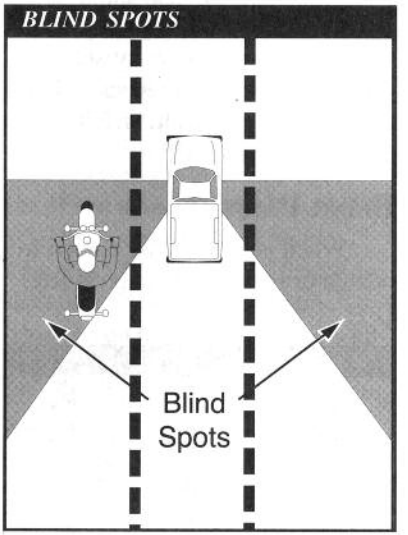
Merging Cars

Drivers on an entrance ramp may not see you 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 speed to open up space for the merging driver.



Cars Alongside

Do not ride next to cars or trucks in other lanes if you do not have to. You might be in the blind spot of a car in the next lane, which could switch into your lane without warning. Cars in the next lane also block your escape if you come upon danger in your own lane. Speed up or drop back to find a place clear of traffic on both sides.



4 ***Test Yourself***

Usually, a good way to handle a tailgater is to:

A. Change lanes and let them pass.

B. Use your horn and make obscene gestures.

C. Speed up to put distance between you and the tailgater.

D. Ignore them.

Answer - page 38

SEE

Good experienced riders remain aware of what is going on around them. They improve their riding strategy by using SEE, a 3-step process used to make appropriate judgments, and apply them correctly in different traffic situations:

- **S**earch
- **E**valuate
- **E**xecute

Let's examine each of these steps.

Search

Scan aggressively ahead, to the sides and behind you to avoid potential hazards even before they arise. How assertively you search, and how much time and space you have, can eliminate or reduce harm. Focus even more on finding potential escape routes in or around intersections, shopping areas, schools and construction zones.

Search for:

- **Oncoming traffic** that may turn left in front of you.
- **Traffic** coming from the left and right.
- **Traffic** approaching from behind.
- **Hazardous** road conditions.

Be especially alert in areas with limited visibility. Visually "busy" surroundings could hide you and your motorcycle from others.

Locate hazards and potential conflicts.

- **Vehicles and other motorcycles**—may move into your path and increase the likelihood of a crash.
- **Pedestrians and animals**—are unpredictable, and make short, quick moves.
- **Stationary objects**—potholes, guard rails, bridges, roadway signs, hedges or trees won't move into your path but may influence your riding strategy.

Evaluate

Consider speed, distance, and direction of hazards to anticipate how they may affect you. Cars moving into your path are more critical than those moving away or remaining stationary.

Predict where a collision may occur. Completing this "what if…?" phrase to estimate results of contacting or attempting to avoid a hazard depends on your knowledge and experience.

Determine what you need to do based on your prediction.

The mental process of determining your course of action depends on how aggressively you searched. The result is your action and knowing which strategy is best for the situation. You want to eliminate or reduce the potential hazard. You must decide when, where and how to take action. Your constant decision making tasks must stay sharp to cope with constantly changing traffic situations.

The decisions you make can be grouped by the types of hazards you encounter.

- **Single hazard**
- **Two hazards**
- **Multiple hazards**

Execute

Carry out your decision.

To create more space and minimize harm from any hazard:

- **Adjust your speed** by accelerating, stopping, or slowing.
- **Adjust your position** and/or direction.
- **Communicate** your presence with lights and/or horn.

Apply the old adage "one step at a time" to handle two or more hazards. Adjust speed to permit two hazards to separate. Then deal with them one at a time as single hazards. Decision making becomes more complex with three or more hazards. Weigh consequences of each and give equal distance to the hazards.

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

5 Test Yourself

To reduce your reaction time, you should:

A. Ride slower than the speed limit.

B. Cover the clutch and the brakes.

C. Shift into neutral when slowing.

D. Pull in the clutch when turning.

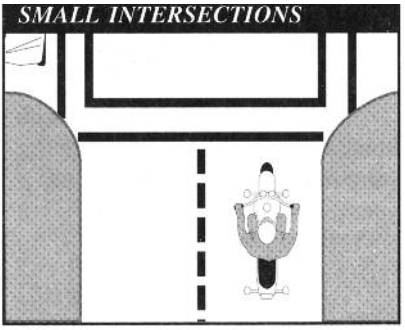
Answer - page 38

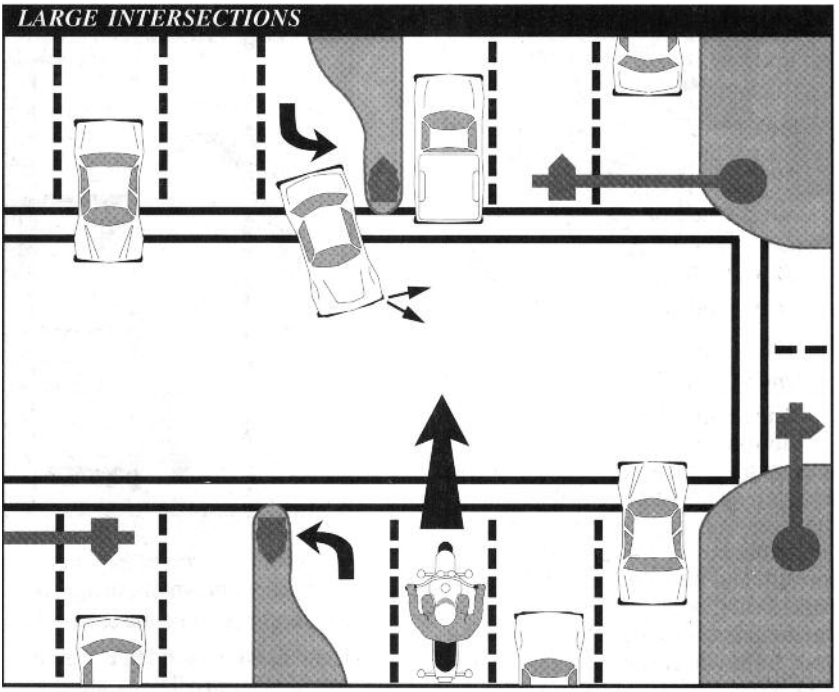
INTERSECTIONS

The greatest potential for conflict between 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. Over one-half of motorcycle/car crashes are caused by drivers entering a rider's right-of-way. Cars that turn left in front of you, including cars turning left from the lane to your right, and cars on side streets that pull into your lane, are the biggest dangers. Your use of SEE (p. 15) at intersections is critical.

There are no guarantees that others see you. Never count on "eye contact" as a sign that a driver will yield. Too often , a driver looks right at a motorcyclist and still fails to "see" him. The only eyes that you can count on are your own. If a car can enter your path, assume that it will. Good riders are always "looking for trouble"—not to get into it, but to stay out of it.

Increase your chances of being seen at intersections. Ride with your headlight on in a lane position that provides the best view of oncoming traffic. Provide a space cushion around the motorcycle that permits you to take evasive action.



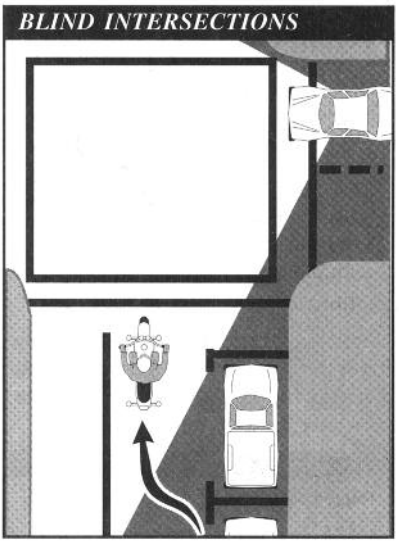


As you approach the intersection, select a lane position to increase your visibility to the driver. Cover the clutch and both brakes to reduce reaction time.

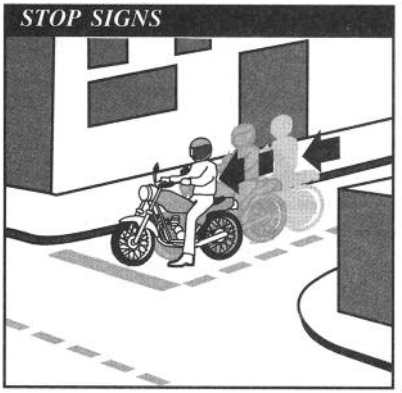
Reduce your speed as you approach an intersection. After entering the intersection, move away from vehicles preparing to turn. Do not change speed or position radically. The driver might think that you are preparing to turn.

Blind Intersections

If you approach a blind intersection, move to the portion of the lane that will bring you into another driver's field of vision at the earliest possible moment. In this picture, the rider has moved to the left portion of the lane—away from the parked car—so the driver on the cross street can see him as soon as possible.



Remember, the key is to see as much as possible and remain visible to others while protecting your space.



If you have a stop sign or stop line, stop there first. Then edge forward and stop again, just short of where the cross-traffic lane meets your lane. From that position, lean your body forward and look around buildings, parked cars, or bushes to see if anything is coming. Just make sure your front wheel stays out of the cross lane of travel while you're looking.

Passing Parked Cars

When passing parked cars, stay toward the left of your lane. You can avoid problems caused by doors opening, drivers getting out of cars, or people stepping from between cars. If oncoming traffic is present, it is usually best to remain in the center-lane position to maximize your space cushion.

A bigger problem can occur if the driver pulls away from the curb without checking for traffic behind.

6 ***Test Yourself***

Making eye contact with other drivers:

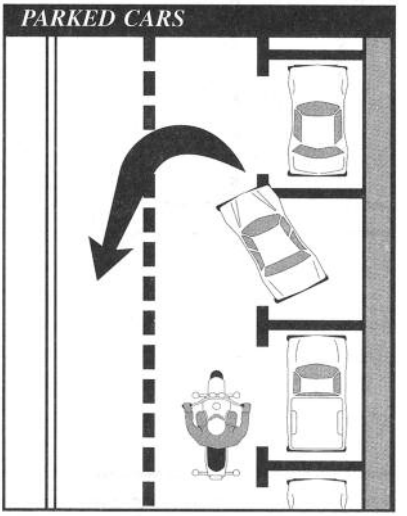
A. Is a good sign they see you.

B. Is not worth the effort it takes.

C. Doesn't mean that the driver will yield.

D. Guarantees that the other driver yield to you.

Answer - page 38



Even if he does look, he may fail to see you.

In either event, the driver might cut into your path. Slow down or change lanes to make room for someone cutting in.

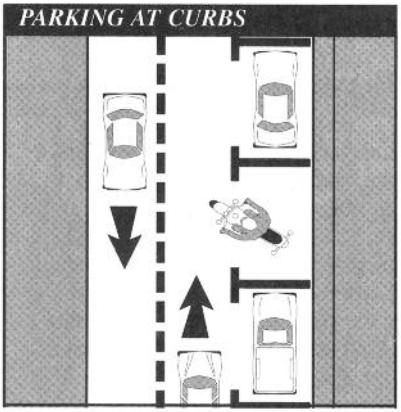
Cars making a sudden U-turn are the most dangerous. They may cut you off entirely, blocking the whole roadway and leaving you with no place to go. Since you can't tell what a driver will do, slow down and get the driver's attention. Sound your horn and continue with caution.

Parking at the Roadside

Park at about a 45° angle with your rear wheel touching the curb.

INCREASING CONSPICUITY

In crashes with motorcyclists, drivers often say that they never saw the motorcycle. From ahead or behind, a motorcycle's outline is much smaller than a car's. Also, it's hard to see something you are not



looking for, and most drivers are not looking for motorcycles. More likely, they are looking *through* the skinny, two-wheeled silhouette in search of cars that may pose a problem to them.

Even if a driver does see you coming, you aren't 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, you can do many things to make it easier for others to recognize you and your cycle.

Clothing

Most crashes occur in broad daylight. Wear bright colored clothing to increase your chances of being seen. Remember, your body is half of the visible surface area of the rider/motorcycle unit.

Bright orange, red, yellow or green jackets or vests are your best bets for being seen. Your helmet can do more than protect you in a crash. Brightly colored helmets can also help others see you.

Any bright color is better than drab or dark colors. Reflective, bright colored clothing (helmet and jacket or vest) is best.

Reflective material on a vest and on the sides of the helmet will help drivers coming from the side to spot you. Reflective material can also be a big help for drivers coming toward you or from behind.

Headlight

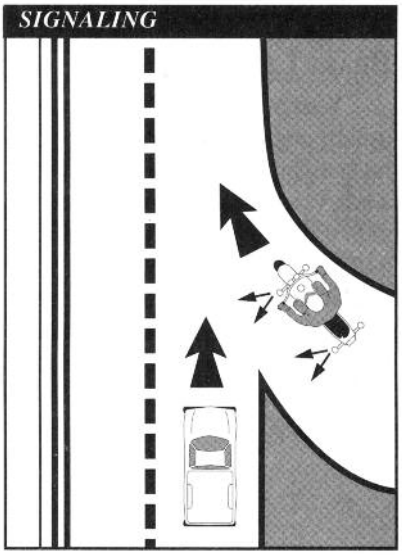
The best way to help others see your motorcycle is to keep the headlight on—*at all times* (although motorcycles sold in the U.S. since 1978 automatically have the headlights on when running). Studies show that, during the day, a motorcycle with its light on is twice as likely to be noticed. Use low beam at night and in cloudy weather. Do not use the high beam during the day. Instead, consider the use of a headlight modulator, which automatically varies the intensity of the low or high beam.

Signals

The signals on a motorcycle are similar to those on a car. They tell others what you plan to do.

However, due to a rider's added vulnerability, signals are even more important. Use them anytime you plan to change lanes or turn. Use them even when you think no one else is around. It's the car you don't see that's going to give you the most trouble. Your signal lights also make you easier to spot. That's why it's a good idea to use your turn signals even when what you plan to do is obvious.

When you enter onto a freeway, drivers approaching from behind are



more likely to see your signal blinking and make room for you.

Turning your signal light on before each turn reduces confusion and frustration for the traffic around you. Once you turn, make sure your signal is off or a driver may pull directly into your path, thinking you plan to turn again. Use your signals at every turn so drivers can react accordingly. Don't make them guess what you intend to do.

Brake Light

Your motorcycle's brake light is usually not as noticeable as the brake lights on a car—particularly when your taillight is on (it goes on with the headlight). If the situation will permit, help others notice you by flashing your brake light before you slow down. It is especially important to flash your brake light before:

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

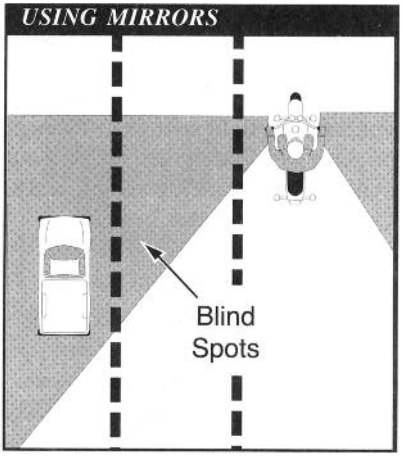
If you are being followed closely, it's a good idea to flash your brake light before you slow. The tailgater may be watching you and not see something ahead that will make you slow down. This will hopefully discourage them from tailgating and warn them of hazards ahead they may not see.

Using Your Mirrors

While it's most important to keep track of what's happening ahead, you can't afford to ignore situations behind. Traffic conditions change quickly. Knowing what's going on behind you is essential for you to make a safe decision about how to handle trouble ahead.

Frequent mirror checks should be part of your normal scanning routine. Make a special point of using your mirrors:

- **When you are stopped** at an intersection. Watch cars coming up from behind. If the driver isn't paying attention, he could be on top of you before he sees you.
- **Before you change lanes**. Make sure no one is about to pass you.
- **Before you slow down**. The driver behind may not expect you to slow, or may be unsure about where you will slow. For example, you signal a turn and the driver thinks you plan to turn at a distant intersection, rather than at a nearer driveway.



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

Head Checks

Checking your mirrors is not enough. Motorcycles have "blind spots" like cars. Before you change lanes, turn your head, and look to the side for other vehicles.

On a road with several lanes, check the far lane and the one next to you. A driver in the distant lane may head for the same space you plan to take.

Frequent head checks should be your normal scanning routine, also. Only by knowing what is happening *all around* you, are you fully prepared to deal with it.

Horn

Be ready to use your horn to get someone's attention quickly.

It is a good idea to give a quick beep before passing anyone that may move into your lane.

Here are some situations:

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

In an emergency, press the horn button and hold it. Be prepared to stop or swerve away from the danger.

Keep in mind that a motorcycle's horn isn't as loud as a car's, therefore, use it, but don't rely on it. Other strategies may be appropriate along with the horn.

Riding at Night

At night it is harder for you to see and be seen. Picking your headlight or taillight out of the car lights around you is not easy for other drivers. To compensate, you should:

Reduce your speed—Do not override your headlight. Ride even slower than you would during the day—particularly on roads you don't know well. This will increase your chances of avoiding a hazard.

Increase Distance—Distances are harder to judge at night than during the day. Your eyes rely upon shadows and light contrast to determine how far away an object is and how fast it is coming. These contrasts are missing or distorted under artificial lights at night. Open up a three-second following distance or more. And allow more distance to pass and be passed.

Use the Car Ahead—The headlights of the car ahead can give you a better view of the road than even your high beam can. Taillights bouncing up and down can alert you to bumps or rough pavement.

Use Your High Beam—Get all the light you can. Use your high beam whenever you are not following or meeting a car. Be visible, wear reflective materials when riding at night.

7 ***Test Yourself***

Reflective clothing should:

A. Be worn at night.

B. Be worn during the day.

C. Not be worn.

D. Be worn day and night.

Answer - page 38

Be flexible about lane position—Change to whatever portion of the lane is best able to help you see, be seen and keep an adequate space cushion.

CRASH AVOIDANCE

No matter how careful you are, there will be times when you find yourself in a tight spot. Your chances of getting out safely depend on your ability to react quickly and properly. Often, a crash occurs because a rider is not prepared or skilled in crash-avoidance maneuvers.

Know when and how to stop or swerve, two skills critical to avoiding a crash. It is not always desirable or possible to stop quickly to avoid an obstacle. Riders must also be able to swerve around an obstacle. Determining the skill necessary for the situation is important as well.

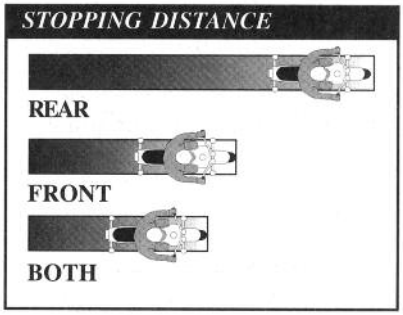
Studies show that most crash-involved riders:

- **Underbrake** the front tire and overbrake the rear.
- **Did not** separate braking from swerving or did not choose swerving when it was appropriate.

The following information offers some good advice.

Quick Stops

To stop quickly, apply both brakes at the same time. Don't be shy about using the front brake, but don't "grab" it, either. Squeeze the brake lever firmly and progressively. If the front wheel locks, release the front brake immediately, then reapply it firmly. At the same time, press down on the rear brake. If you accidentally



lock the rear brake on a good traction surface, keep it locked until you have completely stopped. Even with a locked rear wheel, you can control the motorcycle on a straightaway *if it is upright and going in a straight line*.

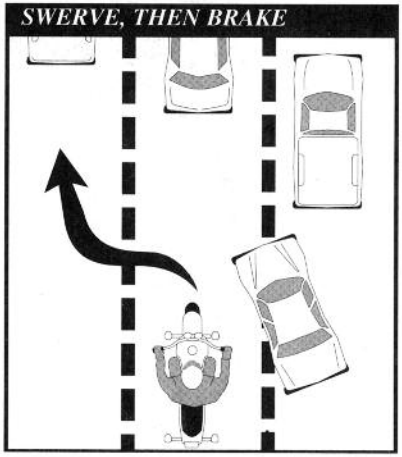
Always use both brakes at the same time to stop. When braking, weight is shifted forward over the front wheel. As a result, the front brake can provide 70% or more of the total stopping power.

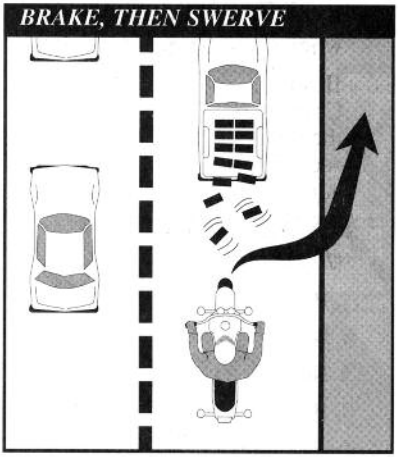
If you must stop quickly *while turning or riding a curve*, the best technique is to straighten the bike upright first and then brake. However, it may not always be possible to straighten the motorcycle and then stop. If you must brake while leaning, apply light brakes and reduce the throttle. As you slow, you can reduce your lean angle and apply more brake pressure until the motorcycle is straight and maximum brake pressure is possible. You should "straighten" the handlebars in the last few feet of stopping, the motorcycle should then be straight up and in balance.

Swerving or Turning Quickly

Sometimes you may not have enough room to stop, even if you use both brakes properly. An object might appear suddenly in your path. Or the car ahead might squeal to a stop. The only way to avoid a crash may be to turn quickly, or swerve around it.

A swerve is any sudden change in direction. It can be two quick turns, or a rapid shift to the side. Apply pressure to the handgrip located on the side of your intended direction of escape. This will cause the motorcycle to lean quickly. Maintain pressure until the motorcycle has cleared the obstacle.





Keep your body upright and allow the motorcycle to lean in the direction of the turn while keeping your knees against the tank and your feet solidly on the pegs. Let the motorcycle move underneath you. Make your escape route the target of your vision. Press on the opposite handgrip once you clear the obstacle to return you to your original direction of travel. To swerve to the left, press the left handgrip, then press the right to recover. To swerve to the right, press right, then left.

IF BRAKING IS REQUIRED, SEPARATE IT FROM SWERVING. Brake before or after—never while swerving.

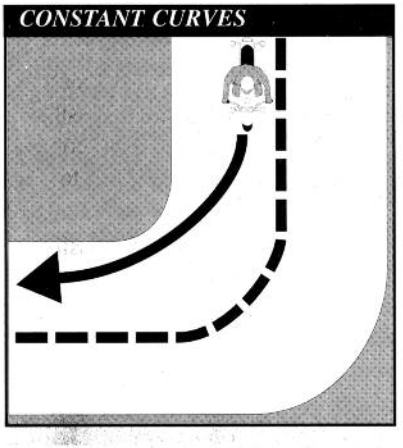
Cornering

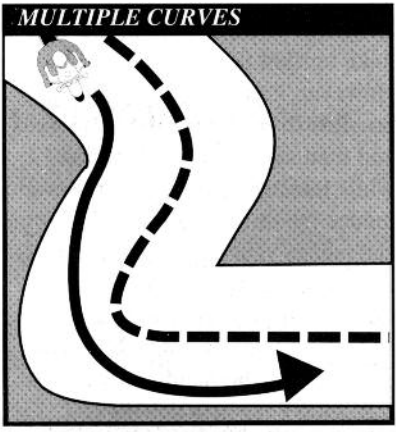
A primary cause of single-vehicle crashes is motorcyclists running wide in a curve or turn and colliding with the roadway or a fixed object.

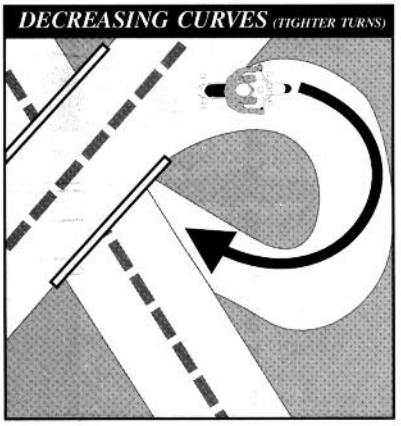
Every curve is different. Be alert to whether a curve remains constant, gradually widens, gets tighter, or involves multiple turns.

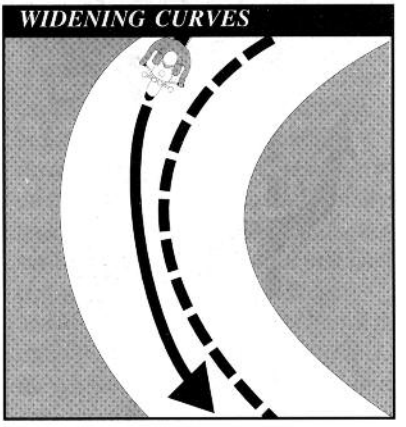
Ride within your skill level and posted speed limits.

Your best path may not always follow the curve of the road.









Change lane position depending on traffic, road conditions and curve of the road. If no traffic is present, start at the outside of a curve to increase your line of sight and the effective radius of the turn. As you turn, move toward the inside of the curve, and as you pass the center, move to the outside to exit.

Another alternative is to move to the center of your lane before entering a curve—and stay there until you exit. This permits you to spot approaching traffic as soon as possible. You can also adjust for traffic "crowding" the center line, or debris blocking part of your lane.

8 ***Test Yourself***

The best way to stop quickly is to:

A. Use the front brake only.

B. Use the rear brake first.

C. Throttle down and use the front brake.

D. Use both brakes at the same time.

Answer - page 38

HANDLING DANGEROUS SURFACES

Your chance of falling or being involved in a crash increases whenever you ride across:

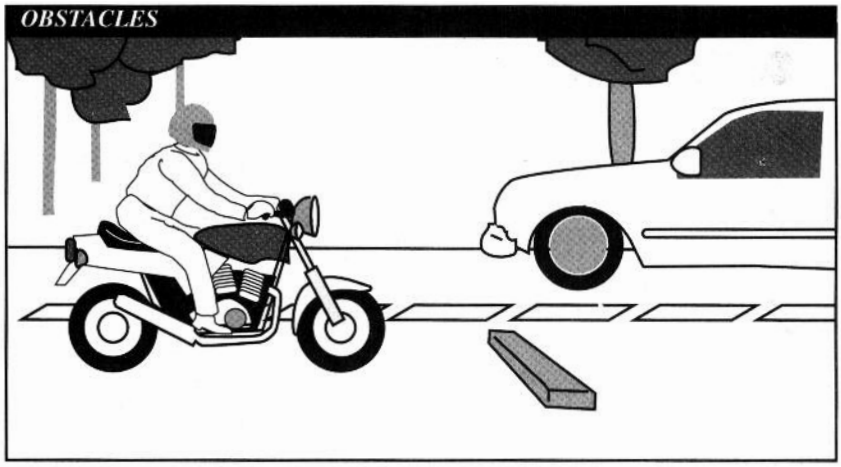
- **Uneven surfaces or obstacles**.
- **Slippery surfaces**.
- **Railroad tracks**.
- **Grooves and gratings**.

Uneven Surfaces and Obstacles

Watch for uneven surfaces such as bumps, broken pavement, potholes, or small pieces of highway trash.

Try to avoid obstacles by slowing or going around them. If you must go over the obstacle, first, determine if it is possible. Approach it as close to a 90° angle as possible. Look where you want to go to control your path of travel. If you have to ride 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 footpegs to absorb the shock with your knees and elbows, and avoid being thrown off the motorcycle.
- **Just before contact**, roll on the throttle slightly to lighten the front end.

If you ride over an object on the street, pull off the road and check your tires and rims for damage before riding any farther.

Slippery Surfaces

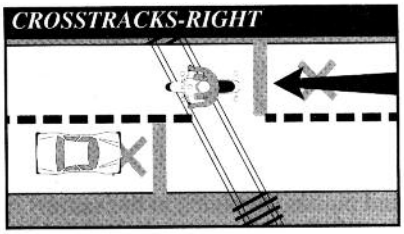
Motorcycles handle better when ridden on surfaces that permit good traction. Surfaces that provide poor traction include:

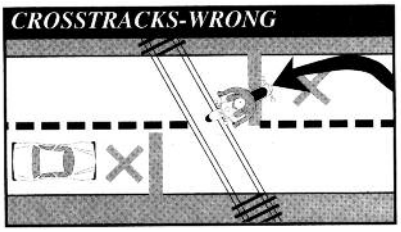
- **Wet pavement**, particularly just after it starts to rain and before surface oil washes to the side of the road.
- **Gravel roads**, or where sand and gravel collect.
- **Mud, snow, and ice**.
- **Lane markings**, steel plates and manhole covers, especially when wet.

To ride safely on slippery surfaces:

- **Reduce Speed**—Slow down before you get to a slippery surface to lessen your chances of skidding. Your motorcycle needs more distance to stop. And, it is particularly important to reduce speed before entering wet curves.
- **Avoid Sudden Moves**—Any sudden change in speed or direction can cause a skid. Be as smooth as possible when you speed up, shift gears, turn or brake.
- **Use Both Brakes**—The front brake is still effective, even on a slippery surface. Squeeze the brake lever gradually to avoid locking the front wheel. Remember, gentle pressure on the rear brake.
- **The center of a lane** can be hazardous when wet. When it starts to rain, ride in the tire tracks left by cars. Often, the left tire track will be the best position, depending on traffic and other road conditions as well.
- **Watch for oil spots** when you put your foot down to stop or park. You may slip and fall.
- **Dirt and gravel** collect along the sides of the road—especially on curves and ramps leading to and from highways. Be aware of what's on the edge of the road, particularly when making sharp turns and getting on or off freeways at high speeds.
- **Rain dries and snow melts faster** on some sections of a road than on others. Patches of ice tend to crop up in low or shaded areas and on bridges and overpasses. Wet surfaces or wet leaves are just as slippery. Ride on the least slippery portion of the lane and reduce speed.

Cautious riders steer clear of roads covered with ice or snow. If you can't avoid a slippery surface, keep your motorcycle straight up and proceed as slowly as possible. If you encounter a large surface so slippery that you must coast, or travel at a walking pace, consider letting your feet skim along the surface. If the motorcycle starts to fall, you can catch yourself. Be sure to keep off the brakes. If possible, squeeze the clutch and coast. Attempting this

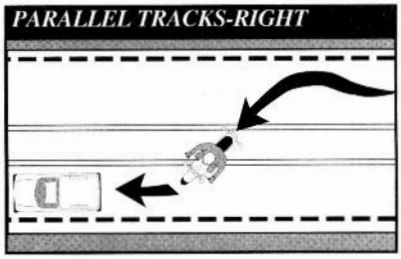


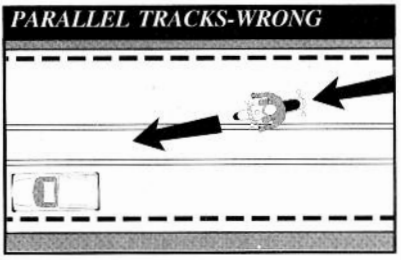


maneuver at anything other than the slowest of speeds could prove hazardous.

Railroad Tracks, Trolley Tracks and Pavement Seams

Usually it is safer to ride straight within your lane to cross tracks. Turning to take tracks head-on (at a 90º angle) can be more dangerous—your path may carry you into another lane of traffic.

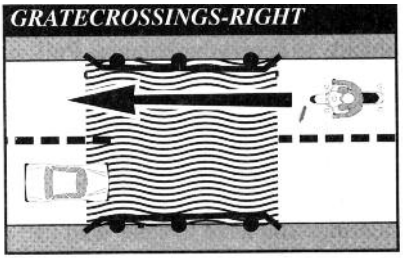


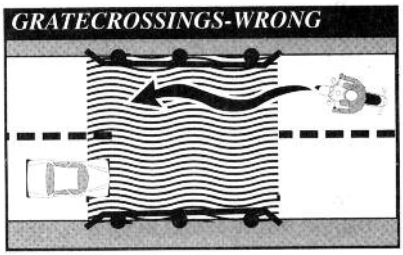


For track and road seams that run parallel to your course, move far enough away from tracks, ruts, or pavement seams to cross at an angle of at least 45º. Then, make a quick, sharp turn. Edging across could catch your tires and throw you off balance.

Grooves and Gratings

Riding over rain grooves or bridge gratings may cause a motorcycle to weave. The uneasy wandering feeling is generally not hazardous. Relax, maintain a steady speed and ride straight across. Crossing at an angle forces riders to zigzag to stay in the lane. The zigzag is far more hazardous than the wandering feeling.





9 Test Yourself

When it starts to rain it is usually best to:

A. Ride in the center of the lane.

B. Pull off to the side until the rain stops.

C. Ride in the tire tracks left by cars.

D. Increase your speed.

Answer - page 38

MECHANICAL PROBLEMS

You can find yourself in an emergency the moment something goes wrong with your motorcycle. In dealing with any mechanical problem, take into account the road and traffic conditions you face. Here are some guidelines that can help you handle mechanical problems safely.

Tire Failure

You will seldom hear a tire go flat. If the motorcycle starts handling differently, it may be a tire failure. This can be dangerous. You must be able to tell from the way the motorcycle reacts. If one of your tires suddenly loses air, react quickly to keep your balance. Pull off and check the tires.

If the front tire goes flat, the steering will feel "heavy." A front-wheel flat is particularly hazardous because it affects your steering. You have to steer well to keep your balance.

If the rear tire goes flat, the back of the motorcycle may jerk or sway from side to side.

If either tire goes flat while riding:

- **Hold handlegrips firmly**, ease off the throttle, and keep a straight course.
- **If braking is required**, however, gradually apply the brake of the tire that isn't flat, if you are sure which one it is.
- When the motorcycle slows, edge to the side of the road, squeeze clutch and stop.

Stuck Throttle

Twist the throttle back and forth several times. If the throttle cable is stuck, this may free it. If the throttle stays stuck, immediately operate the engine cut-off switch and pull in the clutch at the same time. This will remove power from the rear wheel, though engine noise may not immediately decline. Once the motorcycle is "under control," pull off and stop.

After you have stopped, check the throttle cable carefully to find the source of the trouble. Make certain the throttle works freely before you start to ride again.

Wobble

A "wobble" occurs when the front wheel and handlebars suddenly start to shake from side to side at any speed. Most wobbles can be traced to improper loading, unsuitable accessories, or incorrect tire pressure. If you are carrying a heavy load, lighten it. If you can't, shift it. 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 much weight. Make sure windshields and fairings are mounted properly.

Check for poorly adjusted steering; worn steering parts; a front wheel that is bent, misaligned, or out of balance; loose wheel bearings or spokes; and swingarm 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" will only make the motorcycle more unstable. Instead:

- **Grip the handlebars firmly**, but don't fight the wobble.
- **Close the throttle** gradually to slow down. Do not apply the brakes; braking could make the wobble worse.
- **Move your weight** as far forward and down as possible.
- **Pull off the road** as soon as you can and fix the problem.

10 ***Test Yourself***

If your motorcycle starts to wobble:

A. Accelerate out of the wobble.

B. Use the brakes gradually.

C. Grip the handlebars firmly and close the throttle gradually.

D. Downshift.

Answer - page 38

Chain Problems

A chain that slips or breaks while you're riding could lock the rear wheel and cause your cycle to skid. Chain slippage or breakage can be avoided by proper maintenance.

Slippage—If the chain slips when you try to speed up quickly or ride uphill, pull off the road. Check the chain and sprockets. Tightening the chain may help. If the problem is a worn or stretched chain or worn or bent sprockets, replace the chain, the sprockets, or both before riding again.

Breakage—You'll notice an instant loss of power to the rear wheel. Close the throttle and brake to a stop.

Engine Seizure

When the engine "locks" or "freezes" it is usually low on oil. The engine's moving parts can't 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 road and stop. Check the oil. If needed, oil should be added as soon as possible or the engine will seize. When this happens, the effect is the same as a locked rear wheel. Let the engine cool before restarting.

ANIMALS

Naturally, you should do everything you safely can to avoid hitting an animal. If you are in traffic, however, remain in your lane. Hitting something small is less dangerous to you than hitting something big—like a car.

Dogs seem to be attracted to motorcycles. If you are chased, downshift and approach the animal slowly. As you near the point of intersection, accelerate and steer away from the dog. Don't kick at an animal. Keep control of your motorcycle, and look to where you want to go.

For larger animals (deer, elk, cattle) brake and prepare to stop, they are unpredictable.

11 ***Test Yourself***

If you are chased by a dog:

A. Kick it away.

B. Stop until the animal loses interest.

C. Swerve around the animal.

D. Approach the animal slowly, then speed up.

Answer - page 38

FLYING OBJECTS

From time to time riders are struck by insects, cigarettes thrown from cars, or pebbles kicked up by the tires of the vehicle ahead. If you are 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, keep your eyes on the road and your hands on the handlebars. When safe, pull off the road and repair the damage.

GETTING OFF THE ROAD

If you need to leave the road to check the motorcycle (or just to rest for a while), be sure you:

- **Check the roadside**—Make sure the surface of the roadside is firm enough to ride on. If it is soft grass, loose sand, or if you're just not sure about it, slow way down before you turn onto it.

- **Signal**—Drivers behind might not expect you to slow down. Give a clear signal that you will be slowing down and changing direction. Check your mirror and make a head check before you take any action.
- **Pull off the road**—Get as far off the road as you can. It can be very hard to spot a motorcycle by the side of the road. You don't want someone else pulling off at the same place you are.
- **Park carefully**—Loose and sloped shoulders can make setting the side or center stand difficult.

CARRYING PASSENGERS AND CARGO

Only experienced riders should carry passengers or large loads. The extra weight changes the way the motorcycle handles, balances, turns, speeds up and slows down. Before taking a passenger or heavy load on the street, practice away from traffic.

Equipment

To carry passengers safely:

- **Equip and adjust** your motorcycle to carry passengers.
- **Instruct the passenger** before you start.
- **Adjust your riding** technique for the added weight.

Equipment should include:

- **A proper seat**—large enough to hold both of you without crowding. You should not sit any farther forward than you usually do.
- **Footpegs**—for the passenger. Firm footing prevents your passenger from falling off and pulling you off, too.
- **Protective equipment**—the same protective gear recommended for operators.

Adjust the suspension to handle the additional weight. You will probably need to add a few pounds of pressure to the tires if you carry a passenger. (Check your owner's manual for appropriate settings). While your passenger sits on the seat with you, adjust the mirror and headlight according to the change in the motorcycle's angle.

Instructing Passengers

Even if your passenger is a motorcycle rider, provide complete instructions before you start. Tell your passenger to:

- **Get on** the motorcycle only after you have started the engine.
- **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(s), chains or moving parts.
- **Stay directly behind you**, leaning as you lean.
- **Avoid unnecessary** talk or motion.

Also, tell your passenger to tighten his or her hold when you:

- **Approach** surface problems.
- **Are about to start** from a stop.
- **Warn that you** will make a sudden move.

Riding With Passengers

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

12	*Test Yourself*
Passengers should:	
A. Lean as you lean.	
B. Hold on to the motorcycle seat.	
C. Sit as far back as possible.	
D. Never hold on to you.	
Answer - page 38	

- **Ride a little slower**, especially when taking curves, corners, or bumps.
- **Start slowing earlier** as you approach a stop.
- **Open up a larger cushion** of space ahead and to the sides.
- **Wait for larger gaps** to cross, enter, or merge in traffic.

Warn your passenger of special conditions—when you will pull out, stop quickly, turn sharply, or ride over a bump. Turn your head slightly to make yourself understood, but keep your eyes on the road ahead.

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 a sissybar or frame on the back of the seat raises the motorcycle's center of gravity and disturbs 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 the tank bag does not interfere with 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 saddlebags with about the same weight. An uneven load can cause the motorcycle to drift to one side.

- **Secure the Load**—Fasten the load securely with elastic cords (bungee cords or nets). Elastic cords with more than one attachment point per side are more secure. A tight load won't catch in the wheel or chain, causing it to lock up and skid. Rope tends to stretch and knots come loose, permitting the load to shift or fall.
- **Check the Load**—Stop and check the load every so often to make sure it has not worked loose or moved.

GROUP RIDING

If you ride with others, do it in a way that promotes safety and doesn't interfere with the flow of traffic.

Keep the Group Small

Small groups make it easier and safer for car drivers who need to get around them. A small number isn't separated as easily by traffic or red lights. Riders won't always be hurrying to catch up. If your group is larger than four or five riders, divide it up into two or more smaller groups.

Keep the Group Together

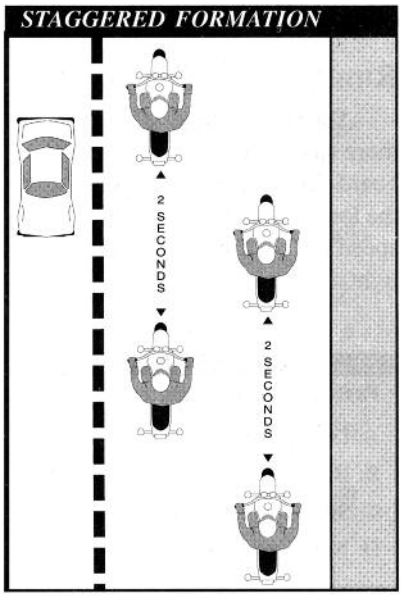
- **Plan**—The leader should look ahead for changes and signal early so "the word gets back" in plenty of time. Start lane changes early to permit everyone to complete the change.
- **Put Beginners Up Front**—Place inexperienced riders just behind the leader. That way the more experienced riders can watch them from the back.
- **Follow Those Behind**—Let the tailender set the pace. Use your mirrors to keep an eye on the person behind. If a rider falls behind, everyone should slow down a little to stay with the tailender.
- **Know the Route**—Make sure everyone knows the route. Then, if someone is separated they won't have to hurry to keep from getting lost or taking a wrong turn. Plan frequent stops on long rides.

Keep Your Distance

Maintain close ranks but at the same time 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.

Don't Pair Up—Never operate directly alongside another rider. There is no place to go if you have to avoid a car or something on the road. To talk, wait until you are both stopped.

Staggered Formation—This is the best way to keep ranks close yet maintain an adequate space cushion. The



leader rides in the left side of the lane, while the second rider stays one second behind in the right side of the lane.

A third rider maintains in the left position, two seconds behind the first rider. The fourth rider would keep a two-second distance behind the second rider. This formation keeps the group close and permits each rider a safe distance from others ahead, behind and to the sides.

- **Passing in Formation**—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 leader should return to the left position and continue riding at passing speed to open room for the next rider.
- **After the first rider passes safely**, the second rider should move up to the left position and watch for a safe chance to pass. After passing, this rider should return to the right position and open up room for the next rider.

Some people suggest that the leader should move to the right side after passing a vehicle. This is not a good idea. It encourages the second 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 curves, turning, or entering or leaving a highway.

13 ***Test Yourself***

When riding in a group, inexperienced riders should position themselves:

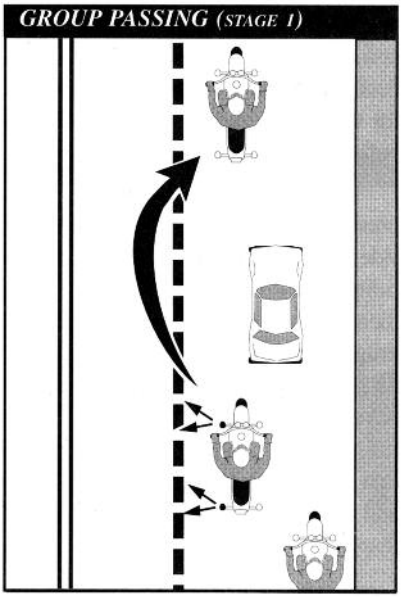
A. Just behind the leader.

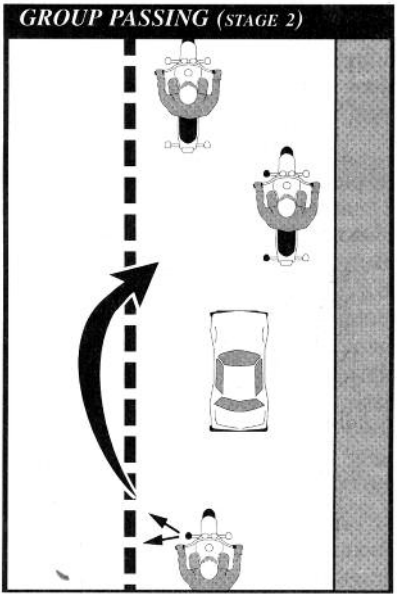
B. In front of the group.

C. At the tail end of the group.

D. Beside the leader.

Answer - page 38





BEING IN SHAPE TO RIDE

Riding a motorcycle is a demanding and complex task. Skilled riders pay attention to the riding environment and to operating the motorcycle, identifying potential hazards, making good judgments, and executing decisions quickly and skillfully. Your ability to perform and respond to changing road and traffic conditions is influenced by how fit and alert you are. Alcohol and other drugs, more than any other factor, degrade your ability to think clearly and to ride safely. As little as one drink can have a significant effect on your performance.

Let's look at the risks involved in riding after drinking or using drugs. What to do to protect yourself and your fellow riders is also examined.

WHY THIS INFORMATION IS IMPORTANT

Alcohol is a major contributor to motorcycle crashes, particularly fatal crashes. Studies show that 40% to 45% of all riders killed in motorcycle crashes had been drinking. Only one-third of those riders had a blood alcohol concentration above legal limits. The rest had only a few drinks in their systems—enough to impair riding skills. In the past, drug levels have been harder to distinguish or have not been separated from drinking violations for the traffic records. But riding "under the influence" of either alcohol or drugs poses physical and legal hazards for every rider.

Drinking and drug use is as big a problem among motorcyclists as it is among automobile drivers. Motorcyclists, however, 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, 2,100 motorcyclists are killed and about 50,000 are seriously injured in this same type of crash. These statistics are too overwhelming to ignore.

By becoming knowledgeable about the effects of alcohol and other drugs you will see that riding and substance abuse don't mix. Take positive steps to protect yourself and prevent others from injuring themselves.

ALCOHOL AND OTHER DRUGS IN MOTORCYCLE OPERATION

No one is immune to the effects of alcohol or drugs. Friends may brag about their ability to hold their liquor or perform better on drugs, but alcohol or drugs make them less able to think clearly and perform physical tasks skillfully. Judgment and the decision-making processes needed for vehicle operation 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. It is difficult to accurately measure the involvement of particular drugs in motorcycle crashes. But we do know what effects various drugs have on the process involved in riding a motorcycle. We also know that the combined effects of alcohol and other drugs are more dangerous than either is alone.

ALCOHOL IN THE BODY

Alcohol enters the bloodstream quickly. Unlike most foods and beverages, it does not need to be digested. Within minutes after being consumed, it reaches the brain and begins to affect the drinker. The major effect alcohol has is to slow down and impair bodily functions—both mental and physical. Whatever you do, you do less well after consuming alcohol.

Blood Alcohol Concentration

Blood Alcohol Concentration or 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. But a variety of other factors may also influence the level of alcohol retained. The more alcohol in your blood, the greater the degree of impairment.

Three factors play a major part in determining BAC:

- **The amount** of alcohol you consume.
- **How fast** you drink.
- **Your body** weight.

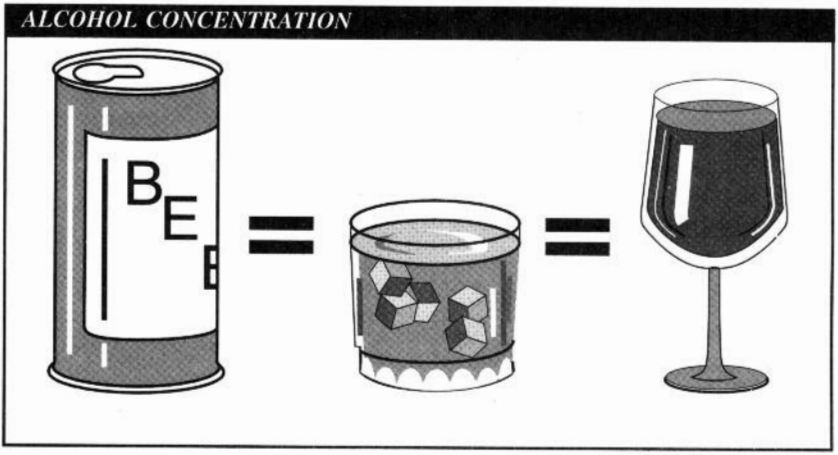
Other factors also contribute to the way alcohol affects your system. Your sex, physical condition and food intake are just a few that may cause your BAC level to be even higher. But the full effects of these are not completely known. **Alcohol may still accumulate in your body even if you are drinking at a rate of one drink per hour.** Abilities and judgment can be affected by that one drink.

A 12-ounce can of beer, a mixed drink with one shot of liquor and a 5-ounce glass of wine all contain the same amount of alcohol.

The faster you drink, the more alcohol accumulates in your body. If you drink two drinks in an hour, at the end of that hour, at least one drink will remain in your bloodstream.

Without taking into account any of the other factors, the formula below illustrates the LEAST amount of drinks remaining in the bloodstream:

Total drinks consumed	*LESS*	# hours since last drink	*EQUALS*	drinks left in body
_____	-	_____	=	_____



A person drinking:

- **8 drinks in 4 hours** would have at least 4 drinks remaining in their system.
- **7 drinks in 3 hours** would have at least 4 drinks remaining in their system.

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

ALCOHOL AND THE LAW

In Maryland, a BAC of .05 or above could lead to an alcohol related conviction. It doesn't matter how sober you may look or act. The breath or urine test is what usually determines whether you are riding legally or illegally.

Your chances of being stopped for riding under the influence of alcohol are increasing. Law enforcement is being stepped up across the country in response to the senseless deaths and injuries caused by drinking drivers and riders.

Implied Consent

In Maryland, any person who drives or attempts to drive a motor vehicle on a highway or on any private property used by the public in general, consents to take a test to determine alcohol concentration or a test to determine the concentration of a drug or controlled dangerous substance.

A police officer, who has reasonable grounds to believe that an individual is driving while impaired by drugs, alcohol, or a controlled substance, may have a drug recognition expert request that person to submit to a blood test.

A person may not be compelled to take a drug or alcohol test. However, if upon receipt of a certified statement from a police officer that a test was refused, the MVA will impose the suspension period for a test refusal.

The MVA will suspend the license of any driver who submits to the test and is determined to have a test result of 0.08 percent alcohol concentration or higher.

Consequences of Conviction

Years ago, first offenders had a good chance of getting off with a small fine and participation in alcohol-abuse classes. Today the laws of most states impose stiff penalties on drinking operators. And those penalties are mandatory, meaning the judges must impose them.

If you are convicted of riding under the influence of alcohol or drugs, you may receive any of the following penalties:

- **License Suspension**—Mandatory suspension for conviction, or refusal to submit to a breath test or blood test if it is deemed necessary.
- **Fines**—Severe fines are another aspect of a conviction usually levied with a license suspension.
- **Community Service**—Performing tasks such as picking up litter along the highway, washing cars in the motor-vehicle pool, or working at an emergency ward.

- **Costs**—Additional lawyer's fees to pay; lost work time spent in court or alcohol-education programs; public transportation costs (while your license is suspended); and the added psychological costs of being tagged a "drunk driver."

MINIMIZE THE RISKS

Your ability to judge how well you are riding is affected first. Although you may be performing more and more poorly, you think you are doing better and better. The result is that you ride confidently, taking greater and greater risks. Minimize the risks of drinking and riding by taking steps before you drink. Control your drinking or control your riding.

Don't Drink

Don't Drink—Once you start, your resistance becomes weaker.

Setting a limit or pacing yourself are poor alternatives at best. Your ability to exercise good judgment is one of the first things affected by alcohol. Even if you have tried to drink in moderation, you may not realize to what extent your skills have suffered from alcohol's fatiguing effects.

Or, Don't Ride—If you haven't controlled your drinking, you must control your riding.

- **Leave the motorcycle home**—so you won't be tempted to ride. Arrange another way to get home.
- **Wait**—If you exceed your limit, wait until your system eliminates the alcohol and its fatiguing effects.

STEP IN TO PROTECT FRIENDS

People who have had too much to drink are unable to make a responsible decision. It is up to others to step in and keep them from taking too great a risk. No one wants to do this—it's uncomfortable, embarrassing and thankless. You are rarely thanked for your efforts at the time. But the alternatives are often worse.

There are several ways to keep friends from hurting themselves:

- **Arrange a safe ride**—Provide alternative ways for them to get home.
- **Slow the pace of drinking**—Involve them in other activities.
- **Keep them there**—Use any excuse to keep them from getting on their motorcycle. Serve them food and coffee to pass the time. Explain your concerns for their risks of getting arrested or hurt, or hurting someone else.
- **Get friends involved**—Use peer pressure from a group of friends to intervene.

It helps to enlist support from others when you decide to step in. The more people on your side, the easier it is to be firm and the harder it is for the rider to resist. While you may not be thanked at the time, you will never have to say, "If only I had…"

FATIGUE

Riding a motorcycle is more tiring than driving a car. On a long trip, you'll tire sooner than you would in a car. Avoid riding when tired. Fatigue can affect your control of the motorcycle.

- **Protect yourself** from the elements—Wind, cold, and rain make you tire quickly. Dress warmly. A windshield is worth its cost if you plan to ride long distances.
- **Limit your distance**—Experienced riders seldom try to ride more than six hours a day.
- **Take frequent rest breaks**—Stop, and get off the motorcycle at least every two hours.
- **Don't drink or use drugs**—Artificial stimulants often result in extreme fatigue or depression when they start to wear off. Riders are unable to concentrate on the task at hand.

14 Test Yourself

If you wait an hour for each drink before riding:

A. You cannot be arrested for drinking and riding.

B. Your riding skills will not be affected.

C. Side effects from the drinking may still remain.

D. You will be okay as long as you ride slowly.

Answer - page 38

EARNING YOUR LICENSE

Safe riding requires knowledge and skill. Licensing tests are the best measurement of the skills necessary to operate safely in traffic. Assessing your own skills is not enough. People often overestimate their own abilities. It's even harder for friends and relatives to be totally honest about your skills. Licensing exams are designed to be scored more objectively.

To earn your license, you must pass a knowledge test and an on-cycle skill test. Knowledge test questions are based on information, practices, and ideas from this manual. They require that you know and understand road rules and safe riding practices. All licensing skill tests are conducted in a controlled, off-street area, by appointment only. To schedule an appointment, please visit MVA's website or call 410-768-7000 (1-800-492-4575 for TTY).

KNOWLEDGE TEST
(Sample Questions)

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 one-quarter.

B. About one-half.

C. About three quarters.

D. All of the stopping power.

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, and you must stop, it is usually best to:

A. Relax on the handgrips.

B. Shift your weight toward the good tire.

C. Brake on the good tire and steer to the side of the road.

D. Use both brakes and stop quickly.

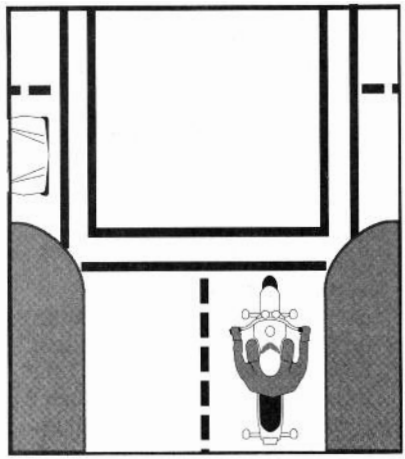
5. The car below is waiting to enter the intersection. It is best to:

A. Make eye contact with the driver.

B. Reduce speed and be ready to react.

C. Maintain speed and position.

D. Maintain speed and move right.



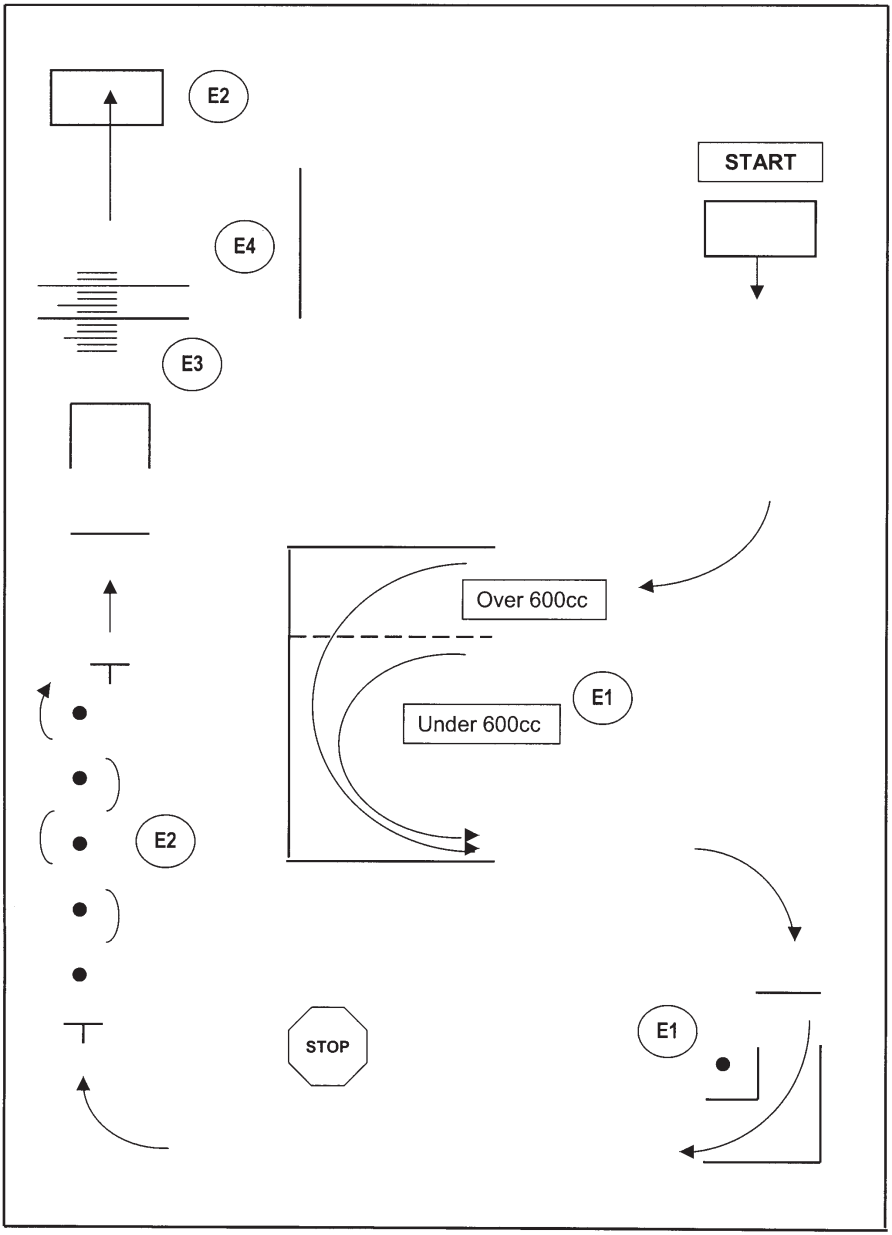
Answers to Test Yourself (previous pages)

1-C	2-D	3-D	4-A	5-B
6-C	7-D	8-D	9-C	10-C
11-D	12-A	13-A	14-C	

Answers to Knowledge Test (above)

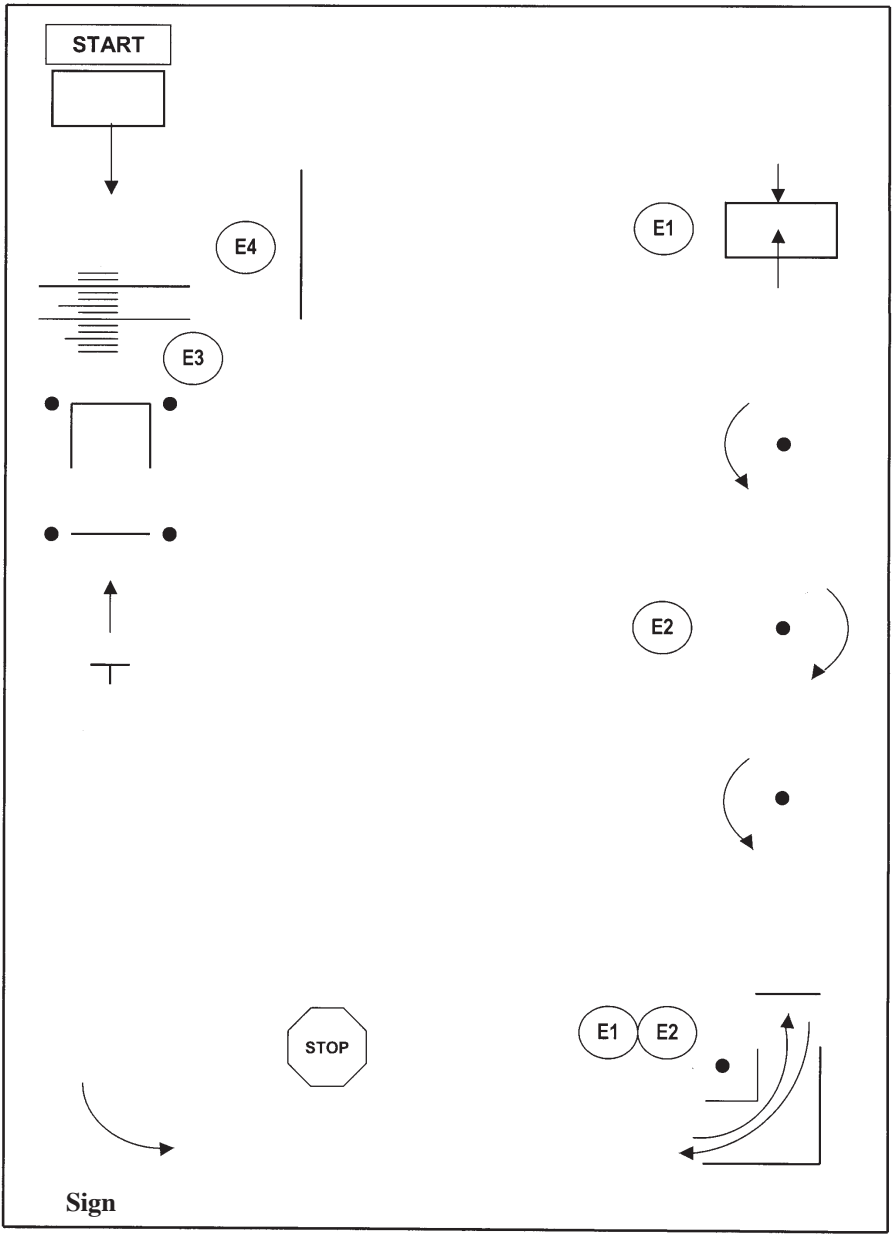
1-B	2-C	3-C	4-C	5-B

MOTORCYCLE/SIDECAR/TRIKE TEST DIAGRAM



2-Wheeled Motorcycle Skill Test Diagram

MOTORCYCLE/SIDECAR/TRIKE TEST DIAGRAM



3-Wheeled Motorcycle Skill Test Diagram

ON-CYCLE SKILL TEST FOR 2 and 3-wheeled motorcycles

Following is a description of the Class M Motorcycle License Skill Test. There is a version of the test for two-wheeled, single-track motorcycles and another for three-wheeled, multi-track motorcycles. The test can be taken on any standard production or stock motorcycle with an engine displacement of 51 cubic centimeters or more.

Two-wheeled motorcycles with a wheelbase of no more than 67 inches can take the test. Motorcycles with custom modifications, or features such as extended forks that result in a longer wheelbase, or have reduced ground clearance, may not be able to perform all of the exercises.

The test can also be taken on three-wheel motorcycles such as a motorcycle-sidecar combination, or a standard trike with two rear wheels, and some motorcycles with two front wheels. The test can accommodate three-wheeled motorcycles that are no more than 60 inches wide and with a wheelbase of no more than 72 inches.

The three-wheel test cannot accommodate trikes that are automotive hybrids or automotive conversions. An automotive hybrid is a motorcycle that shares some defining characteristic with a car, such as an engine, or seating. An automotive conversion is a trike that has a front or rear mounted engine and an automotive drive train. If you think your trike falls into one of these categories, contact the Motorcycle Safety Program at 443-572-8236 or motorcyclesafety@mva.maryland.gov for more information and to find out about other testing options.

NOTE: An applicant who passes the test on a three-wheeled motorcycle will receive a restricted license limiting them to the operation of the type of motorcycle used for testing.

Skill Test for 2-wheeled, single-track vehicles

Exercise #1 – U-Turn and Turn (Right) From a Stop

The applicant completes a "U" turn to the left. Applicants on motorcycles 600 cc's or larger must complete the u-turn in a 24 foot wide area, between the two solid sidelines, while applicants on motorcyles less than 600 cc's must complete the u-turn in a 20 foot area, between the dashed and solid sidelines.

After completing the u-turn, the applicant rides to the Start Line prior to the sharp right turn, stops, then completes a sharp right turn from a stop between the boundary lines.

Penalty points are assessed for putting a foot down, or touching a boundary.

Exercise #2 – Cone Weave, Normal Stop

The applicant rides through a cone weave of five (5) cones, in-line, 12 feet apart. After completing the weave and without stopping, the applicant rides straight ahead bringing the motorcycle to a smooth normal stop with the contact patch of the front tire inside of a 3 foot deep by 5 foot wide box using both brakes.

In the Cone Weave, penalty points are assessed for putting a foot down, or hitting, or skipping a cone. In the Normal Stop, points are assessed for skidding, or touching a boundary.

Exercise #3 – Quick Stop

The applicant rides toward the braking area at approximately 15 mph. When the motorcycle's front tire crosses the line at the beginning of the braking area, the applicant is to stop the motorcycle as quickly and as safely as he or she can using both brakes.

Penalty points are assessed for stopping beyond the standard for your speed, or braking before entering the braking area. If there is standing water in the braking area, the test will not be conducted and the applicant will be assessed (2) penalty points.

Exercise #4 – Obstacle Swerve

The applicant rides toward the obstacle line at between 12-20 mph. When the motorcycle's front tire passes the second line, the rider is to swerve to the right avoiding the first obstacle line and staying inside of the escape boundary line.

Penalty points are assessed for swerving too soon and touching or crossing the obstacle line or escape boundary.

Skill Test for 3-Wheeled, multi-track motorcycles

Exercise #1 – Left Turn, Normal Stop

The applicant rides straight ahead and makes a normal left turn and then a sharp left turn between the outside boundary lines and an inside cone marker. Without stopping, the applicant rides straight ahead bringing the motorcycle to a smooth normal stop with the contact patch of the front tire (left tire if the motorcycle has two front wheels) inside of a 3-foot deep by 5-foot wide box using both brakes.

In the Left Turn, penalty points are assessed for touching a boundary, or marker cone. In the Normal Stop, points are assessed for skidding, or touching a boundary.

Exercise #2 – Cone Weave, Turn From a Stop

The applicant rides through a cone weave of three (3) cones, in-line, 18 feet apart. After completing the weave, the applicant rides to the Start Line prior to the sharp right turn, stops, then completes a sharp right turn from a stop turning between the outside boundary lines and inside cone marker.

In the Cone Weave, penalty points are assessed for hitting, or skipping a cone. In the Turn from a Stop, points are assessed for touching a boundary or the marker cone.

Exercise #3 – Quick Stop

The applicant rides toward the braking area at approximately 15 mph. When the motorcycle's front tire crosses the line at the beginning of the braking area, the applicant is to stop the motorcycle as quickly and as safely as he or she can using both brakes.

Penalty points are assessed for stopping beyond the standard for your speed, or breaking before entering the braking area. If there is standing water in the braking area, the test will not be conducted and the applicant will be assessed (2) penalty points

Exercise #4 – Obstacle Swerve

The applicant rides toward the obstacle line at between 12-20 mph. When the motorcycle's front tire passes the second line, the rider is to swerve to the right avoiding the second obstacle line and staying inside of the escape lane boundary line.

Penalty points are assessed for swerving too soon and touching or crossing the obstacle line or escape bnoundary.

TERMINATION OF TEST

Under certain conditions, the Examiner is required to stop the Motorcycle Skill Test and fail the applicant.

Point Accumulation

When the applicant has been assessed 11 (or more) penalty points.

Stalls Engine Four Times

Indicates lack of clutch/throttle control.

Falls or Drops Motorcycle (2-wheels)

Indicates an inability to operate the motorcycle in a safe manner. A drop has occurred when any portion of the side of the motorcycle comes in contact with the ground.

Tip or Loss of Control (3-wheels)

If in a turn the inside front or rear wheel comes off the ground it is an indication of a loss of control. This does not apply if the wheel of a sidecar comes off the ground in a right turn and the rider lands it properly.

Commits an Unsafe Act

Defined as a rider's inability to perform exercise requirements, or if the rider attempts a skill not called for in an exercise (disregard for instructions).

Fails to Understand or Follow Instructions

The rider is not able to understand the instructions after two explanations, or does not execute the exercise as instructed.

Rider Stops Test

If the rider terminates the test early, the entire test must be administered when retesting. (This also applies when the Examiner stops a test.)

Violation of Traffic Regulations

Failure to stop at the STOP signs, or the front tire crossing onto the white Stop bar.

Diagrams and drawings used in this manual are for reference only and are not to correct scale for size of vehicles and distance.

NOTES

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NOTES

For Information On

MARYLAND'S MOTORCYCLE SAFETY COURSES

Call

443-572-8236

https://mva.maryland.gov/safety/Pages/motorcycle/program-motorcycle-safety.aspx

Basic, Alternate Basic, and
Experienced Rider Courses are
available at training centers throughout the State.

Course Registration Fee
is not refundable.

Licensing tests are administered
at the end of the basic courses.



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