



IDAHO OFF-HIGHWAY MOTORCYCLES



The information contained in this publication is offered for the benefit of those who have an interest in and ride Off-Highway Motorcycles (OHMs). The information has been compiled from publications, interviews, and observations of individuals and organizations familiar with the use of motorcycles. There are many differences in product design, riding terrain, and OHM styles. Due to this fact, there may be organizations and individuals who hold differing opinions. The course also covers protective gear, environmental concerns, state regulations, equipment requirements, and safety techniques. The training includes pre-ride inspections, starting and stopping, turning, riding on hills, and riding over obstacles. Being responsible, using common sense, and practicing important skills are all important ingredients in making motorcycle riding more rewarding.

INTRODUCTION

Riding your motorcycle is an exciting off-road activity. Motorcycles are different from cars. Some motorcycles are for off-road use only; and they require special, different safety skills and handling that must be mastered successfully. These vehicles can be hazardous to operate. You must practice safe operation at all times. If not, serious injury or death could occur.

Once you have learned the correct skills; received proper, certified hands-on training; and successfully mastered a safety course, motorcycle riding presents some new responsibilities. These responsibilities to others and yourself involve safe operation, courtesy, and environmental concerns while riding your motorcycle.

This guide will help you be more aware of your responsibilities as a motorcycle rider. It also will help you understand why you must be safe at all times around these vehicles.

Chapter 1 presents the risks involved in motorcycle riding and tells you how to reduce them. In Chapter 2, you learn about the kinds of protective clothing you need to wear.

It is important to note that motorcycle riding involves more than just riding. Taking care of yourself and the environment must be considered. Therefore, Chapter 3 discusses the sport and the environment.

Since some OHMs are for off-road use only, many motorcycle riders will be in areas far away from city life. Chapter 4 lets you know how to prepare for the unexpected.

Chapter 5 explains motorcycle parts and how the off-highway motorcycle works.

Chapter 6 provides information you need to know before you ride such as inspecting your motorcycle before a ride. Troubleshooting tips and an overview of what tools and supplies you may need on a ride are included in this chapter.

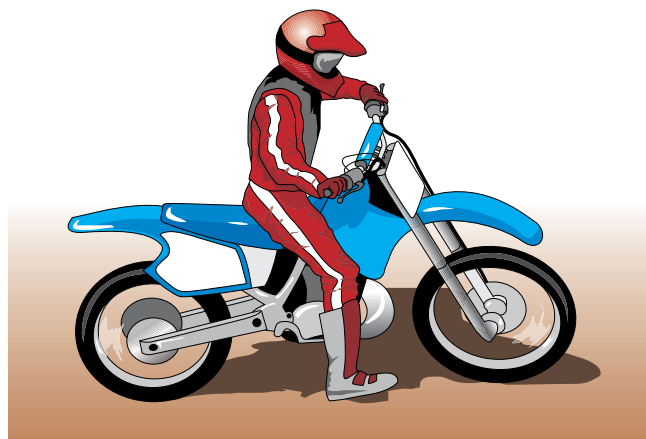
Chapters 7 through 10 focus on how to operate an off-highway motorcycle. Chapter 7 and Chapter 8 explain starting out and basic motorcycle riding skills. Chapter 9 introduces intermediate riding skills. Chapter 10 explains riding your motorcycle in different terrains.

Chapter 11 is a section for parents to review to help identify the needs of youngsters and OHMs.

Activities and skills exercises are placed throughout this book. This will help your progress toward becoming a safe, skilled, and responsible motorcycle operator.

Take enough time to carefully read and understand your owner's manual. Paying close attention to the manual could save you from severe or even fatal injury. Read and comply with all the labels on your motorcycle. These labels address warnings about potential hazards. If you are unsure about something, check your owner's manual or see your motorcycle dealer.

Let's go and learn about off-highway motorcycles!



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Part 1

Riding

Basics

Chapter 1

OHMs—Reducing the Risk

Objectives:

- Know the risks in riding OHMs.
- Know ways of reducing the risks of motorcycle riding.
- Know Before You Go!

Understanding the Risk

Off-highway motorcycles (OHMs) are used by people of all ages. Motorcycles are used as work vehicles by farmers, foresters, hunters, airports, and the military. State and federal agencies use motorcycles for patrolling the woodlands and for conducting search-and-rescue missions. Biologists use them for accessing remote places to study wildlife.

Many people use motorcycles for fun. Exploring new places, seeing the woods, and just being outdoors are part of the fun of off-highway riding. Those who enjoy competition can become involved in motocross racing, hare scrambles, trials riding, ice racing, and enduro competition. Joining a motorcycle club is a good way to meet other riders and find out about trails in the area or off-road events.

Some people think that motorcycles are dangerous. You can get hurt participating in many enjoyable activities if you don't abide by safety rules. Whether you are riding a bicycle, skiing, rollerblading, or just going for a hike, there are certain precautions that you must take to avoid injury. Off-road riding is no different.

What are the risks you face down the trail? How can we find out what they are and prepare for them? The answers to these questions are explored in this *Idaho Off-Highway Motorcycles* manual. You will learn how to manage the risks associated with off-road riding to reduce the chance of getting hurt.

Motorcycles are not toys. Your accident risk increases if you do not know how to operate your motorcycle properly, especially on different kinds of terrain and situations. They are similar to a bicycle because you must continually adjust your body position for better handling and control. The improper use of body position on your motorcycle could cause the loss of control, resulting in an accident involving severe injury or death.

It also is important to practice safe riding strategies and know terrain hazards.

Safe Riding Strategy—SEE

1. **Scan the area.**
2. **Evaluate any potential hazards.**
3. **Execute your decision to avoid the hazard.**

Following the SEE safe riding strategy is a way of safely managing the risks of motorcycle riding which will add to your enjoyment and fun. It helps to organize your thinking and reactions while riding.

The next chapter covers protective gear which is another method of reducing the risks of motorcycle riding. All of these methods are your responsibility. Being a responsible rider makes you a safer rider.

Know Before You Go!

WHAT ARE THE REQUIREMENTS TO RIDE AN OFF-HIGHWAY MOTORCYCLE?

The requirements for motorcycles depend on where you are riding. Generally, riding areas can be broken down into four different categories: 1) off-highway, 2) on-highway, 3) unpaved roads on state and federal public lands, and 4) highways specifically designated by ordinance for off-highway use.

Where do I register for off-highway use?

- Most motorcycle dealers
- Most county motor vehicle departments
- Idaho Department of Parks and Recreation offices

Where can I get my OHM sound tested?

Idaho Department of Parks and Recreation offices
Boise: 208-334-4199
Coeur d'Alene: 208-769-1511
Idaho Falls: 208-525-7121

Where do I register for highway use?

County Department of Motor Vehicles

Where can I ride?

Idaho has some of the best off-highway motorcycle riding opportunities in the nation. Over 95% of these opportunities are on national forest and public land. The U.S. Forest Service provides travel plan maps that identify open and closed roads and trails, closure dates, and other details to help you plan an enjoyable ride. The Bureau of Land Management has similar information. Use the graphic on the next page to locate the office nearest you.

BUREAU OF LAND MANAGEMENT

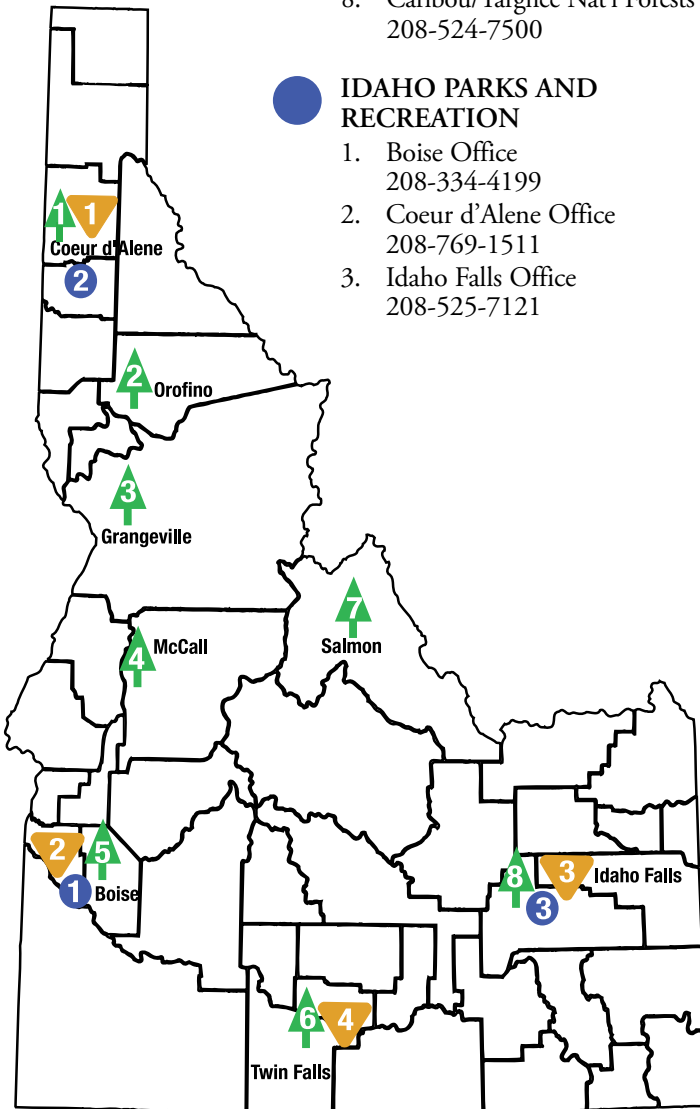
1. Coeur d'Alene District Office
208-769-5000
2. Boise District Office
208-384-3300
3. Idaho Falls District Office
208-524-7500
4. Twin Falls District Office
208-735-2060

U.S. FOREST SERVICE

1. Idaho Panhandle Nat'l Forest
208-765-7223
2. Clearwater National Forest
208-476-4541
3. Nez Perce National Forest
208-983-1950
4. Payette National Forest
208-634-0700
5. Boise National Forest
208-373-4100
6. Sawtooth National Forest
208-737-3200
7. Salmon/Challis Nat'l Forests
208-756-5100
8. Caribou/Targhee Nat'l Forests
208-524-7500

IDAHO PARKS AND RECREATION

1. Boise Office
208-334-4199
2. Coeur d'Alene Office
208-769-1511
3. Idaho Falls Office
208-525-7121



Idaho Registration Requirements

Idaho Title 67 defines the specific legislation governing recreational activities and registration requirements in Idaho. For further information, please review Title 67 by visiting: <http://www3.state.id.us/idstat/TOC/67071KTOC.html>.

Learning the Characteristics of Off-Highway Motorcycles

Off-highway motorcycles are categorized by a number of off-road sports, the most notable being the following.

Motocross—These motorcycles are designed for racing over jumps and are not legal for the street.

Enduro—These long-distance competition motorcycles meet minimum standards to be “street legal,” as well as Environmental Protection Agency (EPA) standards.

Dual-purpose—Designed for paved-road and off-road use, these motorcycles are fully street legal. Their lights and turn signals are approved for highway use. The tires are approved by the Department of Transportation (DOT). Spark arrestors are approved by the U.S. Forest Service (USFS). Noise- and emission-control devices conform to EPA standards.

Being Safe and Responsible

Causes of Accidents

When riding off-road, you usually can avoid the main cause of motorcycle accidents: drivers of larger vehicles who disregard the motorcyclist’s rights. Most often, the driver of the larger vehicle claims he or she didn’t see the motorcycle.

Other factors in accidents involve the motorcyclist’s lack of skills or training:

- Overbraking
- Turning too wide and losing control
- Drinking alcohol which impairs the ability to perform basic maneuvers

Preventing Accidents

- Make yourself visible to other drivers.
- Wear bright clothing.
- Use your lights at all times.
- Use hand signals when turning or stopping.
- Flash your brake light when you slow to a stop.
- Ride where others are most likely to see you.
- Stay out of blind spots.
- Let the driver ahead see you.
- Help drivers at intersections see you.
- Use whip flags on sand dunes.
- Practice skills in a safe area before exploring to more challenging areas.
- Always observe regulations.
- Never drink and ride.

Chapter 2 Riding Gear

Objectives:

- Know the protective gear motorcycle riders must wear.
- Know what types of motorcycle gear to wear in warm and cold weather.

Once you get your new motorcycle, you will no doubt be anxious to start riding as soon as possible. But before you do, be sure you and your machine are ready. Here are some basic rules to keep in mind before you ride.

1. Wear the proper clothing.
2. Know your motorcycle.
3. Attend an education class, and know your limits.
4. Learn the proper way of starting and stopping.

Protective Clothing

The nature of motorcycle riding makes it essential that you wear protective clothing. Knowing what to wear and how to wear it can make you more comfortable when you ride. More importantly, it greatly reduces the chance of injury in case of a spill.

Helmets—Helmets have been *proven* to prevent serious head injury in the event of a collision. Helmets give good protection not only from collisions but also from tree branches and falls. In addition, they provide warmth and some protection from loud noises. Not only should you wear a helmet, but you also should advise friends and family to wear them.

Malcolm Smith said,
“Dress for the crash, not the ride!”

Off-Road Racing Champion Star of “On Any Sunday”

There are a few basic tips to keep in mind when selecting a helmet. When you purchase one, select a quality helmet, one that meets or exceeds the following safety standards. It should bear the Department of Transportation (DOT) label, the American National Standards Institute label (ANSIz90.1), or the Snell Memorial Foundation label.

Your helmet should fit snugly, have a good strap, and be fastened securely. Full-face helmets protect your face as well as your head. Open-face helmets are lighter and cooler and should be used with eye and mouth protection. Adding strips of reflective tape to your helmet will add extra visibility if you ride after dark.

Although you always should wear your helmet when riding, there are times when you should not wear a helmet. It is important to take your helmet off when talking with landowners and other people you meet on the trail so that they can see who you are.

A helmet is the single most important piece of protection a motorcycle rider can wear. Never ride a motorcycle without a helmet!

Eye Protection—You must be able to see clearly in order to ride safely. Any object, such as a small stone, a branch, or even a bug, that hits you in the face can distract you. If you are hit in the eye, you can be blinded. Regular sunglasses do not offer the proper eye protection. A pair of goggles or bubble visor shield will help protect you. They should be free from scratches and shatter resistant, and bear the standard markings z87.1 or VESC 8 (V-8) or be constructed of a hard-coated polycarbonate. They should be well-ventilated to prevent fogging and be fastened securely. Goggles or visors with gray/brown or green lenses are preferred for bright days. Amber or yellow lenses are very useful for cloudy days or late afternoons. These lenses, used in the proper light, can reveal potential hazards in the terrain—especially depressions in the snow. Use clear lenses for night riding to help you see shadows. In extremely cold weather, protective lenses can add both protection and comfort. A helmet visor and wind screen on your motorcycle also help protect your eyes. Be certain to replace your eye protection if it should become scratched.



Gloves—A pair of quality gloves keeps your hands warm in the winter and cool in the summer. They also prevent your hands from getting sore or tired as well as help improve your grip on the controls. They offer good protection in the event of a spill. Off-road gloves, available at motorcycle shops, provide the best

combination of protection and comfort. They also are padded over the knuckles to prevent bruising.

Boots—The type of footwear that provides the most protection is a pair of strong, over-the-calf boots with heels to prevent your feet from slipping off the footpegs. Off-road motorcycle boots offer the best protection for feet, ankles, and legs.

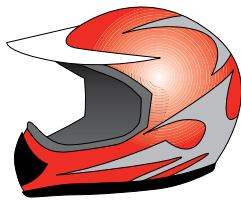
Protective Outer Clothing—A sturdy jacket and pants can do a lot for you in the event of a spill on the ground or gravel. Plain lightweight shirts and pants do not offer as much protection. It is important to protect your skin from scratches.

A long-sleeved shirt or jacket and long pants are minimal requirements for rider protection. Even better protection can be provided by wearing off-road riding gear such as off-road pants with knee pads, a jacket, and shoulder pads. You can look stylish and ready for action and still be well protected.

Protective clothing also offers warmth in winter and helps prevent dehydration in summer.

Winter Clothing

Wind Chill Factor—Motorcycle riding in the winter months demands common-sense protection against moisture and low temperatures. Keeping your body warm and dry on the winter trail is essential for comfort, safety, and health. While the thermometer may indicate a pleasant temperature, don't forget about the “wind chill factor.” It indicates the cooling power of cold air on exposed



skin at different wind speeds or motorcycle speeds. For example, if the temperature on a calm day is 10° Fahrenheit and you are riding your motorcycle at 30 miles per hour, the “wind chill” temperature is equivalent to -12° Fahrenheit.

You should select the right combination of clothing to stay warm. Your entire trip can be miserable if you are not wearing the appropriate clothes. If you dress properly, moisture will evaporate from your body. If you become too hot and your clothing traps the moisture, you will get cold. Clothing should be windproof and water repellent. It should be snug so that it does not catch in the machine, but it should be loose enough to permit freedom of movement and blood circulation.

First Layer—The first layer of clothing should be some type of underwear which ventilates, or “breathes.” Wear any light winter underclothing with special attention to covering your arms and legs. A couple of light layers work better than one heavy layer. The thermal “waffle-weave” underwear is a good type to wear. If the fabric stretches too much, it loses its ability to retain heat; therefore, choose a size that fits you snugly but does not cling to the body. Beware of tight-fitting cuffs and elastic bands that restrict circulation.

Second Layer—The second layer of clothing should provide comfort, utility and durability, such as wool shirts and heavy pants. In colder weather, slip on a wool sweater.

Head Coverings—In addition to your helmet, wear a cap or some covering over your ears and head. Avoid the fixed-bubble type of face guards; they may frost up. Always keep your helmet strap buckled.

A face mask usually is not necessary except in extreme cold or if no other face protection is available. Such a mask helps to reduce the possibility of frostbite. Acrylic pullover face masks typically are used.

Winter Suit—Snowmobile suits are ideal for winter motorcycle rides. They are distinguished by their water-resistant outer shell of nylon or similar material and a lining of acrylic fleece or other lightweight, high-insulating material. One-piece jumpsuits generally provide the most warmth, but two-piece outfits are warm enough for most occasions. This outer clothing should fit loosely. Reflective strips sewn to the outer garment or other pieces of reflective clothing will give you extra visibility during the long hours of darkness in winter months.

Hand Coverings—For hand protection, a good pair of gloves adds yet another essential safety precaution. On a motorcycle, your hands are exposed to the airstream and can become chilled quickly. In wooded areas, your hands also are exposed to brittle twigs and branches. The sport

of snowmobiling has brought some very warm, new styles of gloves to the market. They usually are padded, have warm acrylic fleece lining, and have gauntlets (with straps on the portion extending up your arm) to keep cold air and snow from creeping up your sleeves. Gloves or mittens should not fit tightly nor have an outer shell which gets stiff when cold. A light cotton inner glove or liner will prevent your skin from freezing if you must remove your outer gloves to handle small items. It is recommended that you carry an extra pair of gloves if possible.

Foot Protection—Socks for winter riding should keep your feet warm and dry. They should not be so bulky that they make your boots too tight, which can limit circulation and cause cold feet. Make sure your socks allow your feet a little movement inside the boots, plus a layer of air to help the feet breathe.

If the weather is extremely cold, wearing two pair of socks can help keep your feet warmer. A light pair of socks under a heavy wool pair is ideal.

Boots must be capable of keeping your feet warm and dry even though you do little walking. Be sure that they are not too tight. Again, some of the best footwear is that designed for use by snowmobile operators. They are boots that are actually two boots—a felt liner and a separate outer boot with nylon or leather tops and rubber lowers or soles. This combination keeps cold air and moisture out with an air barrier next to your feet to keep body heat contained.

 **Wind Chill Chart** 

		Temperature (°F)																	
		40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98	

Frostbite Times: 30 minutes (light blue), 10 minutes (medium blue), 5 minutes (dark blue)

Wind Chill (°F) = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})
 Where: T= Air Temperature (°F) V= Wind Speed (mph) Effective 11/01/01

Chapter 3

Sport and the Environment

Objectives:

- Learn how motorcycle models differ.
- Understand motorcycles and their relation to the environment.
- Leave it better than you found it.

Most motorcycles are built for recreation. Learning all you can about your motorcycle and the places you can ride are good things to do for safe and fun riding. But before riding your motorcycle for the first time, you need to learn about how it runs and how to operate it safely.

OHMs are different from other vehicles. Some are designed for off-road use only, and should not be operated on paved roads. They also are different from one another in many ways.

Some motorcycles have rear brakes only, while others have front and rear brakes. Be sure to learn the recommended stopping methods for your machine. **Read your owner's manual.** There are motorcycles with electric starters and motorcycles with kick starters. There are water-cooled motorcycles and air-cooled motorcycles. Some motorcycle transmissions have clutches that are hand-operated, while others have fully automatic clutches.

There are motorcycles with chain drives and motorcycles with shaft drives. Motorcycle throttles can be controlled by twisting the hand grip. Controls and their locations differ from one motorcycle model to another enough so that you should always refer to the owner's manual for the exact location and operation of the controls on the motorcycle you ride.

You need to learn to protect and preserve your riding areas by allowing for future use of the outdoors and leaving it better than you found it. By using common sense and taking a few precautions, you can ensure that the riding area will remain available and in good condition for future use.

Enjoying Nature on Your Motorcycle

Any new method of transportation brings changes to the environment. As a motorcycle rider, you will get a first-hand look at nature's best—from winter's snowy mantle to sandy desert dunes. Be sure that other motorcycle riders traveling on the terrain after you enjoy the same undisturbed view.

You need to learn to protect and preserve your riding areas. It is not hard if you follow a few basic guidelines. Stay on existing designated trails wherever possible. Be careful of the vegetation, especially in sensitive areas like sand dunes, marshes, and alpine areas. As you ride on the trail, you may see animals like rabbits, deer, elk, or other species. While you may be curious about them, do not be tempted to leave the trail to get a closer look. It may frighten the animals. Stay on your motorcycle and enjoy watching all animals from a distance. Remember, livestock such as horses, cattle, and sheep may be encountered. Range animals should be treated as you would treat an unfamiliar dog. Any

sudden movements or noises may startle livestock, so proceed with caution when encountering these animals. Often around livestock, you may find a gate for private or public land. Please respect the landowners by leaving gates as you found them. It is best to shut off your engine when you meet horseback riders.

It is annoying and can be a sign of something wrong to see a motorcycle releasing excessive exhaust or creating excessive noise. Keep your motorcycle properly tuned and muffled to reduce exhaust and noise. Never remove the muffler. Idaho state law requires that your motorcycle's engine noise does not exceed 96 decibels. Sound tests can be obtained at the Idaho Department of Parks and Recreation. (See page 4 for contact information.) Many states and land managers require spark arrestors on internal combustion engines. Do your part in preventing wildfires by checking and cleaning your spark arrestor. Carrying a shovel and fire extinguisher in your vehicle is a good idea in case a fire occurs.



Motorcycles and the Environment

The environment is a fragile place. If each of us takes full responsibility for our actions while out in nature's areas, we can help current and future generations enjoy what we enjoy now.

Motorcycle operators should be aware of how simple acts of irresponsibility can lead to environmental damage. For example, vegetation is nature's method of lessening erosion by increasing the stability of the soil. If a motorcycle or heavier vehicle destroys plant cover, the dry soil can be eroded by the wind or rain. Vegetation is very vulnerable when covered in frost. Although vegetation damage may appear harmless, you should avoid causing this type of damage because of the serious environmental problems that can result.

Staying on designated trails is the best way to protect the environment. You should know the area you are riding in when you do ride. Keep in mind that the wetter the soil, the easier it is to tear up. Avoid swampy areas and bogs where the soil is excessively wet. Try to ride in those areas that have lots of sand, clay, or gravel since that soil isn't as easily eroded. Steeper slopes also are easier to erode than lesser grades since water runs off quickly. To ease the grade, look for a switchback; or if you must climb, try to stay on the rockiest terrain.

The soil and sediment of fish-spawning grounds are easily stirred up and damaged by mechanical disturbance. You can help prevent this disturbance by avoiding small streams and creeks. If you have to cross a stream or go up and down streambanks, it is best to use an established ford or bridge or to ride where the banks have a gradual incline. This is safer for you while it also reduces the impact on the streambank. Motorcycle operators should strive to reduce this negative impact. Caring for the environment is everyone's responsibility.

Know that others use the same trails as you. Don't be a trail hog. Respect the rights of others regardless of their means of transportation; everyone deserves to enjoy the outdoors. Please yield the right-of-way to all non-motorized users. Motorcycle users also yield the right-of-way to hill-climbing users and users on the right at intersections. Be considerate of others on the road, trail, and camping areas. Being kind to others on the trail goes a long way to building a positive image about motorcycle riders.

***The rule that all responsible outdoor enthusiasts follow is:
If you pack it in, pack it out!***

There are some terrains that are very vulnerable to damage by man. Tundra and sand dunes, for example, have only thin layers of soil and vegetation. Some of these areas may be protected by federal or state regulations and could take years to recover if their surfaces are damaged. Soil erosion from motorcycle tires also can disturb ground-nesting animals, which affects the balance of the food chain.

Another factor involving motorcycles and the environment is a basic problem known to all outdoor enthusiasts: *litter*. As well as being unsightly, litter results in long-range environmental impact. For example, dumped oil can make its way to spawning areas, small streams, and creeks and thus destroy the fish life. Take out all trash that you bring on the ride. Don't litter, and properly dispose of waste by bringing plenty of garbage bags.

Environmental Tips: Tread Lightly!®

The Tread Lightly!® program was started by the U.S. Forest Service in 1985 in response to the increasing visitor impact in both private and public recreation areas. The U.S. Bureau of Land Management adopted Tread Lightly! shortly thereafter; and in 1990, it was transferred into the private sector in order to increase its effectiveness. Thus, today Tread Lightly! is an apolitical, not-for-profit organization which unites a broad spectrum of federal and state government agencies, manufacturers of recreational products, media, enthusiast groups, and concerned individuals who share a common goal of caring for our natural resources. Tread Lightly! focuses on increasing public awareness of how you can enjoy the great outdoors while minimizing your impact on it. It emphasizes responsible use of off-highway vehicles, other forms of travel, and low-impact principles related to outdoor recreational activities.



Travel and Recreate With Minimum Impact.

- Stay on designated trails and routes. Do not cut switchbacks or take shortcuts. Resist the urge to create new trails or roads.
- Avoid roads and/or trails that are obviously wet and muddy to minimize trail damage.
- Travel only on land or water areas that are open to your type of recreation.

Respect the Environment and the Rights of Others.

- Remember, designated wilderness areas are reserved for travel by foot and horse only.
- Be considerate and honor others' desire for solitude and a peaceful outdoor experience. Keep the noise, speed, and dust to a minimum.
- When driving, be especially cautious around horses, hikers, and bikers. Pull to the side of the road or trail, shut off the engine, and allow them to pass.
- Always yield the right-of-way to those traveling uphill.
- If you brought it in, take it back out. Don't litter on the trail, and don't leave anything behind.

Educate Yourself—Plan and Prepare Before You Go.

- Have the right information, maps, and equipment to make your trip safe.
- As you travel, comply with all signage. Honor all gates, fences, and barriers; and make sure to get permission before crossing private land.
- Make a realistic plan, and stick to it. Notify family and friends, know your plan, and travel with a group of two or more people or vehicles in case problems occur.

Allow for Future Use of the Outdoors by Leaving It Better Than You Found It.

- Avoid sensitive areas at all times (i.e., stream banks, lakeshores, and meadows). Remember to cross streams at 90-degree angles at fording points only.
- Be sensitive to the life-sustaining needs of wildlife and livestock. Avoid spooking any livestock you encounter.
- Thoroughly clean your vehicle and all your gear immediately after your trip to avoid the spread of noxious weeds.

Discover the Rewards of Responsible Recreation.

- Respect the environment and other trail users. By using common sense and common courtesy, what is available today will be here to enjoy tomorrow.
- Remember, if you abuse it, you'll probably lose it.

Enjoyment of the great outdoors provides the opportunity to get away from it all. Help preserve the beauty and inspiring attributes of the great outdoors for yourself and generations to follow by recreating responsibly.

Weed Awareness

As you ride your motorcycle be on the lookout for noxious weeds! These weeds are non-native invasive plants that may be impacting the land or wildlife in your favorite recreational area.

You can help stop the spread of noxious weeds in Idaho.

- Stay on designated trails and away from weed-infested areas.
- Clean your machine after wilderness rides.
- Flush the undercarriage of your motorcycle after riding.
- Clean your riding gear, camping gear, and pets before leaving a wildlife area.



CLEAN YOUR MOTORCYCLE AFTER RIDING!

To report noxious weed infestations, try first to map the area with a GPS and then call your county weed superintendent's office. To learn more about noxious weeds in Idaho, log on to the Idaho Weed Awareness Campaign's website at www.idahoweedawareness.org.

Motorcycles and Hunting

The use of motorcycles during hunting season has skyrocketed in recent years. This increased use causes increased conflict in the field. Motorcycle-equipped hunters are encroaching on some areas previously accessed solely by hunters on horseback or on foot. Increasing numbers of motorcycles traveling cross-country create trails that may cause soil erosion and damage to vegetation. Remember, motorcycles must obey all vehicle laws. Specifically, never shoot a gun while sitting on a motorcycle and always remember never to trespass during hunting season.

Responsibility or Regulation— The Choice Is Yours!

So what does this mean for the typical hunter with an OHM? It's simple. If motorcycle users are irresponsible with the use of their machines, there will be increasing pressure on land and wildlife management agencies to restrict motorcycle use during hunting season. There are people, among them other hunters, who are asking for a total ban on motorcycle use during hunting season. Regulations are being considered that limit motorcycle use to certain times of the day and further restrict, or prohibit completely, off-trail travel.

Nobody likes regulations; but if irresponsible motorcycle use continues to cause unacceptable impacts, regulations will become necessary to ensure protection of public lands. A better alternative would be for motorcycle users to recognize the impact their activity can cause and voluntarily take steps to reduce that impact. Motorcycle users are not unique in this respect—as more and more people use public lands for recreation, the potential impact of these activities is growing fast. Virtually all recreation users—jeepers, horse enthusiasts, rafters, snowmobilers, hikers, campers, rock climbers, motorcyclists, fishermen, and mountain bikers—are being asked to reduce the impact of their activities so that public lands can be enjoyed by this and future generations.

Preventing Future Closures

To prevent future closures of riding trails during hunting season, you should:

- Stay on existing roadways and trails.
- Make sure the trail is a designated OHV (Off-Highway Vehicle) Trail open to motorcycle use.
- Know the motorcycle-use regulations for the area in which you are hunting.
- Keep your motorcycle properly tuned and muffled to reduce exhaust noise. USDA Forest Service–approved spark arrestors are required on public land.

OHM Laws

Laws are necessary to protect people, property, and motorcycle riding. States have different laws covering registration, equipment, and operation. Idaho State Parks and Recreation will help you learn the laws in Idaho. Please call 208-334-4199 or visit www.parksandrecreation.idaho.gov for information. Remember that before you travel in another state, you need to consult the law enforcement agencies of that state to be sure you operate within laws of that state. Refer to the back of this book for neighboring states' telephone numbers.

The future of motorcycle use depends on the attitude of motorcycle riders towards the sport and on the safe, lawful operation of all off-highway vehicles. Your assistance as a rider in this effort will be greatly appreciated and ensure safe motorcycle riding for all.

The future of motorcycle riding also depends on the amount of land open for motorcycle use. Respect landowners and their rights. Always seek landowner permission. Trespassing is defined as entering any enclosed (fenced) or cultivated land without the expressed or implied consent of the owner.

OHM Learning Activity—Self Quiz

Decide whether each statement is true or false. Circle T or F.

- | | | |
|---|---|---|
| T | F | 1. When riding a motorcycle in a national forest, you should remove the muffler. |
| T | F | 2. If hunting, you may shoot while sitting on your motorcycle. |
| T | F | 3. Motorcycle riders should use only designated trails. |
| T | F | 4. Vegetation helps prevent soil erosion. |
| T | F | 5. Staying on the trail is a good way to protect the environment. |
| T | F | 6. The term "off-highway vehicle" means you may drive anywhere you want as long as it is off the highway. |

Chapter 4

Facing the Unexpected

Objectives:

- Learn how to make a survival kit.
- Know how to prepare for the unknown.

If your motorcycle breaks down and you are unable to fix it or walk out, it is extremely important to remember that you must conserve energy in order to survive. Seek shelter from the wind, and restrict your body movements to reduce sweating. Your machine can be used as a windbreak or as part of a lean-to. Seek shelter in a protected area. An overhanging rock shelf or a clearing at the base of a tree makes an ideal shelter.

In a timbered area, you can make a lean-to by placing one horizontal bar between two trees or crotches in upright poles. Lean small branches against the horizontal bar. Interweave branches to thatch the shelter.

Snowbanks and deep drifts also offer protection possibilities. Dig a snow cave facing away from the wind, slightly larger than your body size. Line with any extra material you may have such as the seat of the motorcycle. Place a six-inch diameter ventilating hole in the top of the cave.

Good planning, systematic maintenance of your motorcycles, and traveling with a companion on another motorcycle will eliminate most emergencies. To be better prepared, learn and follow these steps in case of an emergency.

1. Prepare a checklist of supplies, tools, and other items necessary for your ride. Consult it prior to your departure.
2. Let someone know where you will be and when you plan to return.
3. Ride with someone else—a friend or a local club.
4. In all cases, attend to injuries first, and then sit down and calmly think through solutions and possibilities. Panic is your worst enemy.
5. If a fire is needed, choose a protected spot that is located away from snow-covered overhanging branches. Gather small dead branches or dead brush to start a fire. Add larger dead wood after the small branches have begun to burn. Collect plenty of fuel before dark should you have to spend the night.
6. Do not travel on foot in unknown areas at night. Conserve your energy because it will help keep you warm. Moderate exercise can increase circulation to cold limbs, but don't overdo it. Good judgment and common sense are always necessary to make the best of an emergency situation. If you become unsure of your location during a heavy storm, find shelter and keep warm.



Survival Kit in a Can

A survival kit is an absolute necessity when planning a long backcountry trip on your motorcycle. Whether with a friend or a group, a survival kit should be included with your supplies at all times.

Prepare your survival kit with current conditions in mind, but include a few items for different terrains—the woods and desert. Ask your instructor about items needed for your local area.

Items for a Survival Kit in a Can

1. One foot of heavy cotton string, dipped in melted paraffin and then wrapped in waxed paper. Cut off 1½" piece, fray end, light with match, and use to start a fire. It burns longer and hotter than matches alone.
2. Salt wrapped in foil packet. Improves flavor of food.
3. Two shelled fish hooks. May be used with leader to catch fish.
4. Four feet of black plastic electrical tape. Use primarily to seal and waterproof can. Also may be used to fasten splints on a broken limb, repair torn clothing, etc.
5. Steel wool, 00 or finer. Makes excellent tinder, even after getting wet. Water can be shaken out, and it will start from small spark. Burns very hot but very quickly, so it should be used with other tinder (such as pine needles, twigs, etc.) wrapped inside to start a fire.
6. Picture-hanging wire. Makes an excellent snare wire; also may be used in erecting a shelter.
7. Water purification tablets. Use if there is any doubt about purity of the drinking water.
8. Metal container with mirror affixed to lid. Use mirror to signal rescue aircraft. Use container to melt snow for water or to mix up small quantities of soup.
9. Small tube of antibiotic ointment. Use on small cuts and burns to avoid infection.
10. Wooden matches, dipped in paraffin to make them waterproof; stick broken off to be shorter.
11. Safety pins. Use to fasten torn clothing or replace lost buttons.
12. Packet of condensed soup mix. May be mixed, small amount at a time, with water in a can.
13. Vitamin pills (one-per-day type). Help maintain health on inadequate diet.
14. Small whistle. Use to signal—three blasts are recognized distress signal—to save your voice.
15. Adhesive bandages. Use on small cuts, abrasions, or burns.
16. 20-lb. test leader. Use with hooks to fish, with needle to sew clothing, to make snares, or to lash shelter together.
17. Razor blade (single edge). Use to make fuzz stick to start fire, to clean and skin small creatures caught for food, or to cut up belt or other material to make thongs or ties.
18. Needle with large eye. Use with leader for sewing; use to remove splinters.
19. A re-sealable plastic bag. Protect items from moisture.
20. A surplus army belt ammo pouch for carrying and storage.



Understanding Trail Signs

When riding your motorcycle, you may encounter trail signs. They are designed to help trail riders by supplying needed information about the area. Many of the signs you encounter will be used by snowmobilers as well. Below are some of the most common trail signs for you to learn.

Regulatory Signs



Stop Sign

Purpose: To be used along a trail prior to a road crossing

Color: Red and white



Trail Marker

Purpose: To indicate where OHM riding is permitted

Color: Brown with white symbol and border



Yield Sign

Purpose: To be used at trail intersections or prior to driveways

Color: Red and white



Restrictive

Purpose: To indicate areas where OHM riding is not permitted

Color: Red slash across white symbol on brown background

Warning Signs

Purpose: To advise motorcycle operator to proceed with caution at a reduced speed or to warn user of a specific trail hazard

Color: Yellow or white with black letters or symbol



Trail Signs



Blazer

Purpose: To show that motorcycle user is still on the trail

Color: Green



Directional Blazer

Purpose: To indicate changes in trail direction

Color: Green with black border and arrow



Route Sign

Size: 24"x18"

Color: Reflective green background with reflective white border, symbol, and lettering

Note: Blazers can be different colors. Please check with the land manager for the area where you plan to operate.



Route Signs

OHM Route Arrow

Size: 12"x9"

Color: Reflective green background with reflective white border and symbol



Part 2

Off-Highway Motorcycles

Chapter 5

The Names of Parts

Objectives:

- Learn the names of the main motorcycle parts.
- Locate and operate parts without looking at your hands.
- Identify safety features.

This chapter is not intended to make you a mechanic but rather to familiarize you with the basic parts of your motorcycle. By increasing your knowledge and skills, you will decrease your chance of injury and mishap. Those who have ridden ATVs may need to relearn control locations for motorcycles. Be sure you know the control locations before you ride.

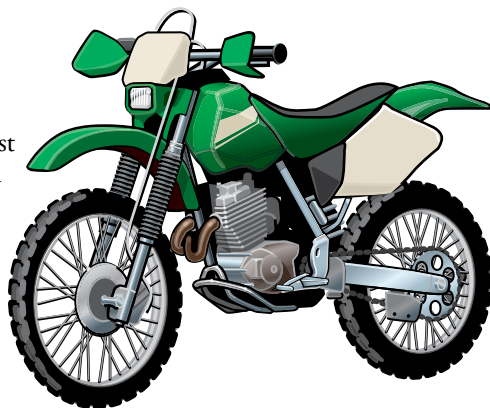
Before attempting to ride your motorcycle, you should **read the owner's manual carefully**. Study your manual and actually look at your motorcycle to memorize the location of the controls.

To help you learn, a friend could call out the names of parts at random. If you try this method, mount the motorcycle and physically locate the controls when the part is called out. The motorcycle always should be off when doing this exercise. Mount the motorcycle from the left after raising the sidestand and keeping control with the handlebars.

By being able to locate the controls and parts without looking, your attention stays focused on the road while riding, thus avoiding sudden obstacles or hazards.

Common Motorcycle Parts

The following is a list of the most common motorcycle parts which you should be able to identify. (Consult your owner's manual to learn control locations for your motorcycle.)



Brake (Foot) Pedal (most models)—Operated by the right foot.

Brake (Hand) Lever—Located on the right side of the handlebar.

Choke—Used to start a cold engine.

Clutch—Used to connect and disconnect the engine and driving gears. Allows gears to shift or change (on some models). Located on the left side of the handlebar.

Drive Chain—Connects the engine to the rear axle to give a motorcycle “drive” or forward motion.

Engine—Provides the source of power in a motorcycle where combustion takes place.

Footpegs—Can be bars or platforms that are located below the engine and on which a rider rests his/her feet.

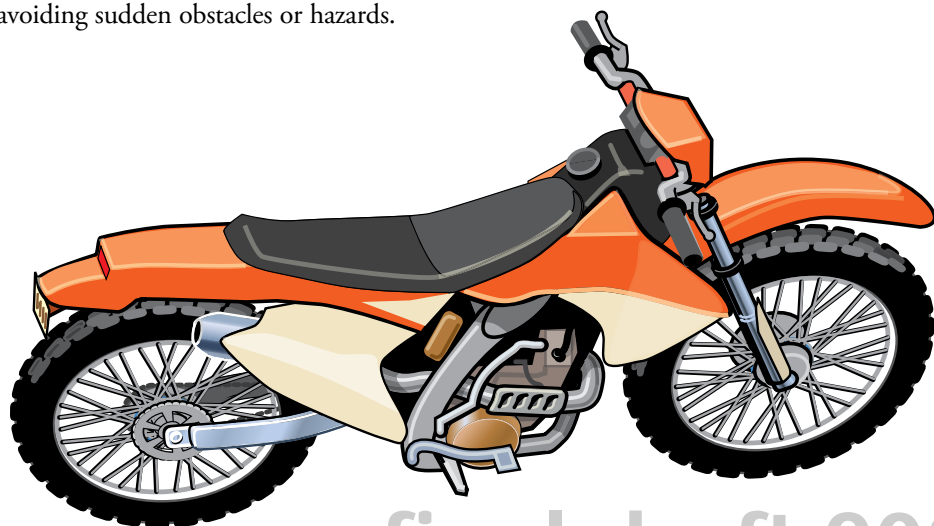
Fuel Valve—Usually hand-operated and with on, off, and “reserve” positions to control gas flow to the carburetor.

Ignition Switch—Enables the engine to start.

Shift Lever—Usually operated by the left foot, and is used to change gears for various riding conditions.

Spark Arrestor/Muffler—Appears as a combination on all new motorcycles. The spark arrestor helps prevent fires, while the muffler helps to reduce sound level.

Throttle—Operated by the right hand to control the engine speed.



OHM Learning Activity—Self Quiz

Circle the letter which best completes the sentence.

1. The most important piece of protective clothing a motorcycle rider can wear is:
(a) boots (b) a pair of quality gloves (c) a helmet
2. Which of these is not an OHV?
(a) Four-wheel ATV (b) Enduro motorcycle (c) Dune buggy
(d) Snowmobile (e) Tractor
3. Which of the following should motorcycle riders wear for protection?
(a) Over-the-ankle boots (b) Goggles (c) Gloves (d) All of the above
4. The cooling power of cold air on exposed skin at different motorcycle speeds is called the:
(a) wind chill factor (b) Celsius factor (c) Yukon Wind Syndrome

OHM Safety Features

The following safety features are found on many OHMs. See if you can find them on your motorcycle. Check your owner's manual for additional items.

Brake Wear Indicator—This indicator shows if and when the brakes are worn past the service limit and must be replaced.

Tool Kit—A basic set of tools is usually supplied with your motorcycle. Supplement your tool kit with (1) pliers, (2) screwdrivers—Phillips and standard, (3) adjustable wrench, and (4) spark plug and spark plug wrench if these tools weren't included in your basic set. These basic tools can take care of most adjustments or basic repairs. Carry them on your machine at all times.

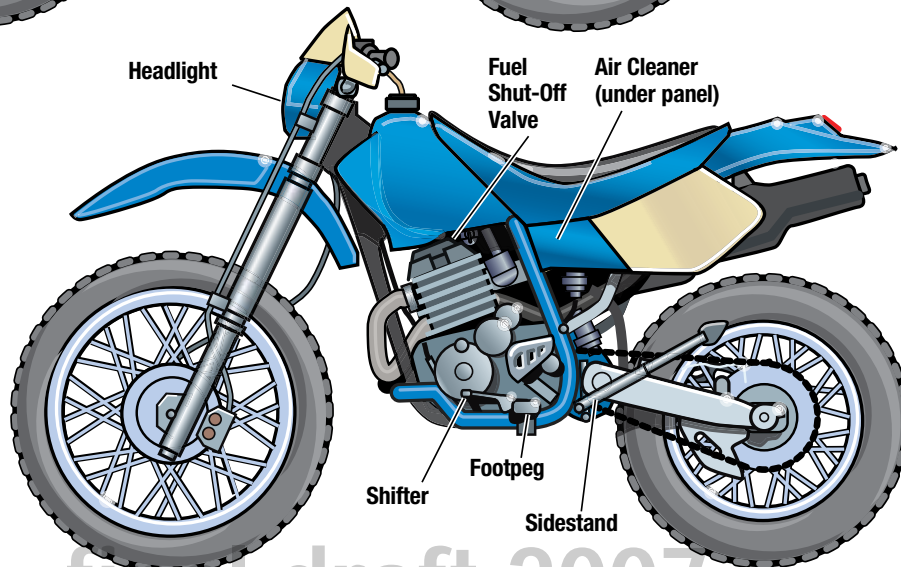
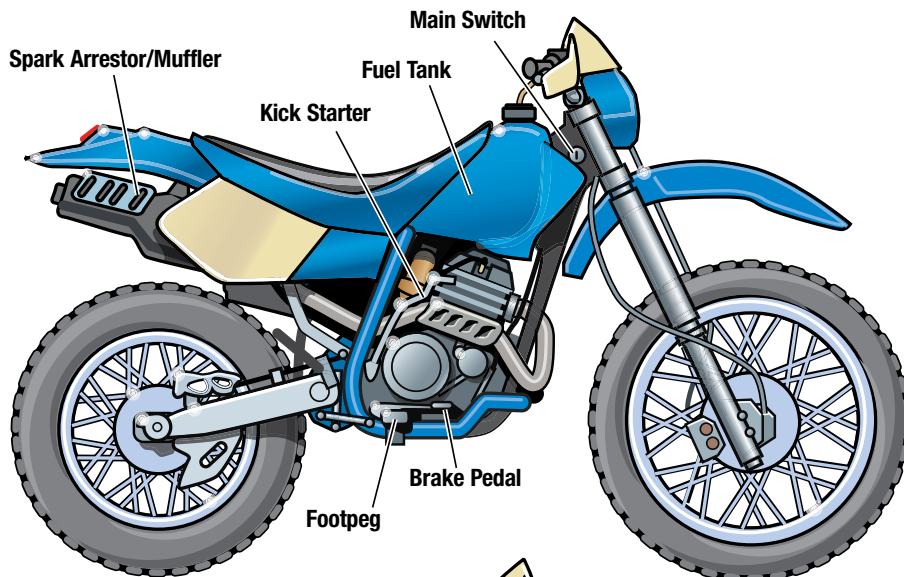
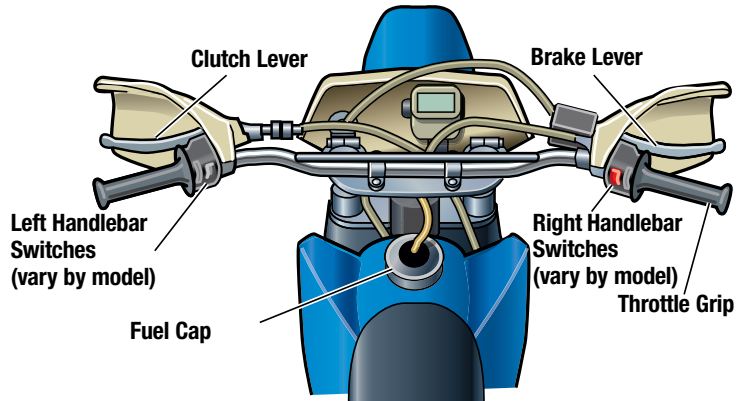
Remember that if you start your motorcycle, you are responsible for controlling it. Many accidents occur because the driver was not ready to take control of the machine.



OHM Learning Activity—Name the Parts

You must be able to locate and operate motorcycle controls without looking or hesitating to help you maintain control of your motorcycle under various conditions.

Review the motorcycle controls in the following diagrams. Remember, your motorcycle may or may not have all the parts and controls shown in these illustrations. Also, their positions may vary from model to model. Consult your owner's manual to learn the specific parts, controls, and locations for your model.



Chapter 6 Before You Ride

Objectives:

- Learn the steps in a pre-ride inspection.
- Be able to troubleshoot minor problems.

Now that you know the basics of riding and the parts of your motorcycle, you are almost ready to ride. Prior to each ride, you should always perform a pre-ride inspection to see that your motorcycle is in proper working order.

Motorcycle Pre-Ride Inspection

This section will give you some important pointers for personal safety and the safety of your motorcycle. Inspecting the mechanical condition of your equipment before each ride is very important to help minimize the chance of injury or being stranded, as well as to ensure long-term performance from your motorcycle. Remember, you can ride farther in an hour than you can walk in a day.

Your owner's manual will list what to check on your particular model; also follow the maintenance procedure outlined in your owner's manual. The basic items to be inspected can be identified by using the TCLOCS checklist below.

Completing a pre-ride inspection before you ride your motorcycle should become an automatic routine with each outing.

There are a few other tips that you should pay close attention to before riding.

1. Always tell someone where you are going and when you expect to return.
2. Never go alone. Use the buddy system—ride with other motorcycle riders.
3. Accurately check your tire pressure (usually motorcycle tires are around 10-15 pounds per square inch or PSI). You'll need a tire pressure gauge. Consult your owner's manual for proper pressure. Underinflated or overinflated tires may cause wheel damage when riding over bumpy terrain or may cause your motorcycle to handle improperly.

TCLOCS: Pre-Ride Inspection	
TIRES AND WHEELS	<ol style="list-style-type: none"> 1. Air pressure—Always use the recommended tire pressure. Motorcycle riders must be sure that the air pressure in the front and rear tires is equal. 2. Condition—Check for cuts or gouges that could cause air leakage. 3. Wheels—To avoid loss of control or injury, make sure axle nuts are tightened and secured by cotter pins. Check these before every run.
CONTROLS AND CABLES	<ol style="list-style-type: none"> 1. Controls—Check the location of all the controls by sitting on the motorcycle. Make sure they work properly. 2. Throttle and other cables—Make sure the throttle moves smoothly and snaps closed with the handlebars in any position. An off-road environment is hard on these parts. 3. Brakes—Ensure the controls operate smoothly and are adjusted according to the owner's manual. They should be positioned for easy reach. Your brakes are a crucial part of riding and must be kept in tip-top condition. 4. Foot shifter—Make sure it's attached firmly and positioned for safe operation.
LIGHTS AND ELECTRONICS	<ol style="list-style-type: none"> 1. Ignition switch (if so equipped)—Check the condition of the switch, and make sure it works properly by switching it on and off during your warm-up period. 2. Engine stop switch—Test operation to be sure it turns off the engine. 3. Headlight and taillight (if so equipped)—Turn them on and look to see if they are working. You may be out after dark unexpectedly. 4. Brake light—Press the brake, and have your riding partner make sure the brake light illuminates.
OIL AND FUEL	<ol style="list-style-type: none"> 1. Range—Don't get stranded because you are out of oil or fuel. Know your motorcycle's cruising range. 2. Oil—Check oil level with dipstick or sight glass while the engine is off. Check your owner's manual for the correct procedure. 3. Gasoline—Always start your ride with a full fuel tank. 4. Leaks—Check for fuel or oil leaks. 5. Air filter—Take off the filter cover and check the condition of the air filter element. Be sure it is clean and not torn or blocked. 6. Spark plugs—Replace if necessary.
CHAIN, SUSPENSION, & CHASSIS	<ol style="list-style-type: none"> 1. Chain—Inspect, adjust, and lubricate the chain regularly. Your chain is the vital link from the engine to the wheels. Check for chain slack or free play so that it is within the specifications as described in your owner's manual. 2. Suspension—Check condition and wear. 3. Nuts and Bolts—Rough terrain will loosen parts. Look and feel for loose parts while the engine is off. Shake handlebars, footpegs, etc. before each ride to make sure they're secure. Periodically tighten all major fasteners with hand tools. 4. Spark arrestor/muffler—Make sure it's attached firmly and working properly.
SIDESTAND	<ol style="list-style-type: none"> 1. Check condition and retention.

4. Make sure wheel lug nuts are tight. Grasp each tire at the front and rear, and try to rock it on its axle to detect worn out bearings or loose nuts. There should be no free play as you rock the wheel.
5. Check the brake wear indicator. Periodically disassemble and clean the brakes. Check your owner's manual for the correct procedure.

Learning to ride a motorcycle can be a frustrating experience at times, but everyone must go through the beginner stage. Even seasoned riders don't know everything. This manual can help guide you in motorcycle safety operation, but nothing will help you as much as your own riding experiences. That experience, plus constant attention to good riding practices, will put you on your way to becoming a skillful, safe rider.

Troubleshooting

Emergency situations can occur with any type of mechanical vehicle—unknown hazards on the trail, a burned-out light at night, or an empty fuel tank in the middle of nowhere. These are not only inconvenient but also are unsafe conditions for motorcycle riders.

Problems may be caused by one or a combination of factors. Use the troubleshooting chart below to determine the possible causes of a problem, and then check the recommended solution to each cause.

By forming teams of individuals or partners, you can use this chart for a contest. One person asks another what might be wrong if, for example, the engine does not start. The other must answer and tell what he/she would do. Score one point for each correct answer, naming both the probable cause and its remedy.

Motorcycle Troubleshooting Tips		
Trouble	Probable Cause	Remedy <small><i>Consult your Owner's Manual for proper procedures.</i></small>
1. Engine is hard to start or does not start at all.	• Engine stop switch is off.	Turn on.
	• Ignition switch is off.	Turn on.
	• Spark plug is fouled.	Clean or replace.
	• Fuel tank is empty.	Fill.
	• Fuel line/filter is plugged.	Check condition of fuel lines, filter, and fuel tank. Clean or change filter. Clean fuel tank, if necessary. Check to see if fuel supply valve is clogged or off. Also check that the fuel cap vent is "ON."
	• Spark plug is not working.	Have your parent check spark plug leads. Check for correct spark plug gap and condition. Check to see that the wire is on the spark plug.
2. Engine stalls.	• Engine is flooded.	Disengage choke, wait 60 seconds or more, and then depress throttle fully and crank engine. Release throttle immediately after engine starts.
	• Fuel cap vent is closed.	Open it.
	• Fuel tank is empty.	Fill.
	• Fuel supply valve is off.	Turn on.
	• Air filter or fuel tank vent is clogged.	Clean according to directions in owner's manual.
	• Spark plug is fouled.	Clean or replace.
3. Engine does not develop enough power.	• Engine is overheated.	After too much idling/low speed running, turn engine off to cool. If cooling fins are packed with mud or dirt, clean them. For low engine oil, replace with sufficient amount. Make sure you have the correct spark plug.
	• Compression system is leaking.	Have a parent tighten the cylinder head. You may have to replace the head or base gasket.
	• Clutch is slipping.	Have a parent readjust the clutch cable.
	• Muffler is clogged.	Consult your dealer.
	• Air filter or spark plug is dirty.	Clean or replace.
4. Poor handling and hard steering.	• Choke left on when engine is warm.	Turn off.
	• Front, rear tires are not properly inflated.	Check air pressure and properly inflate tires.

Tools and Supplies

Since OHMs are operated off-road, motorcycle riders must be prepared with the right safety precautions. It is not like being in a disabled car which may be within walking distance of help. Fortunately, most problems can be fixed on the spot if you carry a minimum assortment of tools and spare parts.

Carry your owner's manual plus a tool kit as described in Chapter 5. Regular maintenance will prevent most breakdowns. However, once in awhile your motorcycle may fail. If you are in an unpopulated area when this occurs, carrying the following items could save a long walk.

- 25 feet of ¼" nylon rope
- compass
- electrical and duct tape
- extra key
- extra spark plugs
- first-aid kit
- flashlight
- food and water supply
- fuel de-icer and snowshoes (in winter)
- hand axe
- knife
- map
- signal flares
- spare headlamp
- sturdy tow rope or chain
- sunblock
- taillight bulb
- tarp
- tool kit
- waterproof matches

Preparing for Long Trips

When you are planning a long outing into a remote area, you should bring these items in addition to the ones already mentioned.

- assorted springs, nuts, & bolts
- brake fluid
- extra levers
- gas hoses
- grips
- lug nuts
- master links
- survival kit (see Chapter 4)
- throttle and brake cables
- tire gauge
- tire tubes

Adjusting for Your Riding Conditions

In cold conditions be aware that a dramatic altitude change, such as going from sea level to 8,000 feet elevation, will bring about a change in tire pressure. Recheck your tires' PSI if you go into a higher altitude. Follow the recommended PSI for your motorcycle model (listed in your owner's manual), but be sure you know what it is before you depart.

If you ride in dunes during evening hours, be sure your motorcycle is equipped with functioning lights. A product called Cyalume® lightstick can provide extra light. The lightstick lasts about six hours and is disposable. It is a small, three-inch, clear plastic tube that contains chemicals which, when mixed together by bending the tube, create a bright fluorescent light. They come in a variety of colors. Whip antennas are available with a plastic holder on top in which this Cyalume® lightstick fits neatly, thus providing a night light for safety. In Idaho, it's the law to have a whip flag while riding on designated dunes.



Chapter 7

Starting Up

Objectives:

- Know the procedures for starting a motorcycle engine.
- Know the proper way to start the motorcycle moving.
- Know how to shift the motorcycle's gears.

Your owner's manual gives instructions for all aspects of operating your motorcycle. Many motorcycles are alike; but different makes and models start in different ways, and parts may be in different locations. The key and the choke are commonly located on the panel in front of the driver. Check with your owner's manual first to note the placement of the controls.

Starting the Engine

Your owner's manual will tell how to start your particular model. Most motorcycles use a kick-start system. The general starting procedure is represented by the phrase "FINE-C."

Starting Out

Before riding your motorcycle, make sure that the area where you plan to ride is open to OHMs. Remember, you are riding *off-highway* only—most of these vehicles are not street legal. Also make sure you have the property owner's permission.

You should be seated with both hands on the handlebars and raise feet slowly to the footpegs as the motorcycle begins to move. When mounting, take care not to step on the shifter. Be sure that the engine is warmed up before you begin your ride.

1. Hold the rear brake, and shift into first gear.
2. Release the rear brake, and slowly advance the throttle.
3. If your machine has a manual clutch, release it slowly. If the clutch is engaged suddenly, the motorcycle might move suddenly, causing you to lose control or fall off. Motorcycles can flip over backward if the clutch is engaged too suddenly.

Driving a motorcycle is similar to riding a bicycle. Balance is kept by shifting your body weight. If needed, put your foot out for balance like you do on a bike. The throttle and brake also help you to control the machine. Be prepared to shift your weight quickly to counteract the bumps and dips of the terrain. You must learn to adapt to weather and differing terrain. Many accidents happen from hitting a dip or rock—be prepared.

FINE-C: Start-Up Procedure	
FUEL	1. Move the fuel valve to the "ON" position.
IGNITION	2. Turn the ignition to the "ON" position.
NEUTRAL	3. Check that the transmission is in neutral.
ENGINE	4. Check that the engine stop switch is in the "RUN" or "START" position.
CHOKE	5. If the engine is cold, put the CHOKE in the "ON" position. Your owner's manual will explain where the choke is located on your motorcycle. 6. Start the engine according to the directions in your owner's manual. 7. Once the machine is warmed up, return the choke to its normal position. If you don't, the machine will not run properly and will use too much gas. This also may damage the engine if the motorcycle is allowed to run with the choke in the "START" position.

Changing Gears

Always close the throttle when changing gears to prevent the front wheel from lifting. Learn the sounds of your engine so that you can shift to keep the engine's speed in the most efficient range.

If your motorcycle has a manual clutch, learn where the engagement point is to prevent stalling and allow smooth shifting.

To change gears, you must learn to coordinate your throttle and clutch lever (if so equipped).

1. Release the throttle.
2. Change the gears (use clutch, if equipped).
3. Release the shift lever as you slowly apply the throttle again.



Exercise — Knowing Your OHM

Part 1: Parts and Controls

Identify each of the following items and describe what they do:

air filter
brake light
chain
choke
clutch

engine stop switch
front brake lever
fuel valve
fuel vent
gear shift

headlight
ignition
kick starter
rear brake lever
spark plug

taillight
throttle

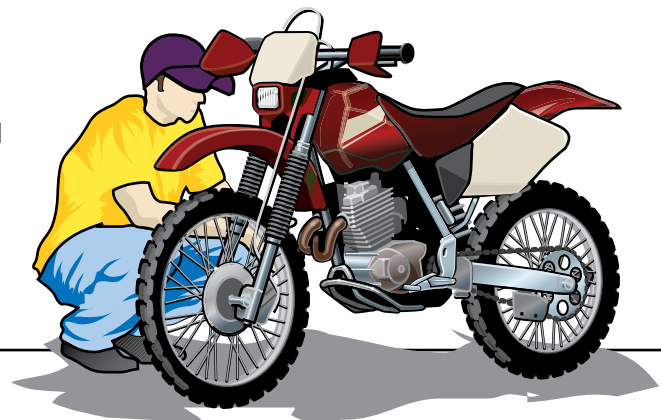
While sitting on the motorcycle, be able to locate the controls necessary to operate it without looking down to find them. Practice on a stationary motorcycle until you have mastered this exercise.

Part 2: Pre-Ride Inspection

Demonstrate how to check the following parts and controls before each ride.

brakes
chain
electronics (lights/ignition)
gas/oil

shifter
throttle
tires
wheels



Chapter 8

Basic Riding Skills

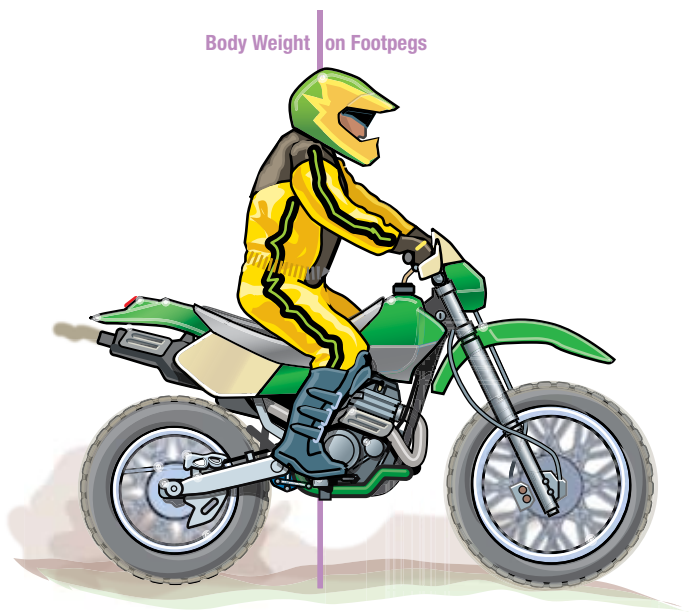
Objectives:

- Learn the correct procedure for braking.
- Learn how to turn the motorcycle at various speeds.

Body Position and Its Importance in Safety

On a motorcycle, your body is, effectively, an extension of the machine. Each component of body position affects your ability to steer, turn, control the throttle, maintain balance, and spot obstacles quickly. Therefore, to master control of your motorcycle, always use correct body position. Whether sitting or standing, maintain this position.

- Stay forward with your weight directly over the footpegs.
- Keep your feet on the footpegs with your knees slightly bent.
- Press your knees into the gas tank.
- Hold the handlegrips firmly to control the motorcycle in tough terrain. Grip with the right wrist down to avoid accidentally giving too much throttle. If your position is correct, your arms should have to bend slightly to hold the handlegrips.



The balls of your feet should be placed on the footpegs for best control.

Beginning To Ride

Mastering the basic skills of accelerating, braking, turning, and stopping are very important. If you are not trained to use these basic skills, you will be unprepared to proceed to intermediate and advanced riding. The exercises in this chapter should be performed with ease before you attempt any other skills.

Accelerating

Accelerating smoothly on your motorcycle requires maintaining correct body position and practicing shifting.

1. Keep your hips over or slightly in front of the footpegs. Lean your upper body forward.
2. Press your feet down and back into the footpegs, which will help you counter the force pushing you rearward.
3. Practice shifting until you can coordinate the throttle, clutch, and shifter into one smooth, quick motion.

Use this acceleration drill to improve your control skills.

1. Accelerate hard until you reach third gear.
2. Stop accelerating.
3. Apply the brakes.
4. Come to a complete stop.
5. Repeat steps 1-4. As your skills improve, you will notice that Step 3 comes closer to Step 2 until they occur at the same time; and Step 4 occurs much closer to Step 3.

Braking

Your owner's manual describes your motorcycle's braking system. As with other functions, keep your weight forward for better braking control.

1. Ease up on the throttle.
2. Keep your weight forward and over the footpegs.
3. Press your knees against the gas tank to keep your weight forward and balanced.
4. Apply the brake. Although the front brake is most effective for stopping on most surfaces, practice using front and rear brakes on all surfaces.

Use the engine stop/kill switch during normal and emergency stops. After stopping, turn off the ignition key or switch to save your battery.

Downshifting and braking at the same time works best for slowing down. This will give you the ability to be in the correct gear when you cease braking and resume traveling speed.

WARNING:

Avoid steep grades until you are an experienced rider.

Turning

As you ride your motorcycle, you usually will slow down before you turn. However, quick turns are sometimes necessary to avoid unexpected obstacles.

For slow turns: As you turn the handlebars in the direction of the turn, shift your weight away from the turning direction. If necessary, brake, shift, or throttle, depending on the speed and sharpness of the turn.

For quicker turns: As you turn the handlebars in the direction of the turn, lean quickly in the direction you want to turn.



OHM Learning Activity—Self Quiz

Circle the letter which best completes the sentence.

- Once the machine is warmed up, you should:
(a) return the choke to its normal position (b) place the choke in the ON position
(c) keep adjusting the choke
- In the pre-start routine, the engine stop switch should be set in the:
(a) OFF position (b) START or RUN position (c) NEUTRAL position
- Once your motorcycle is ready to start, make sure that the area you are to ride is:
(a) clear of obstacles (b) flat with plenty of space to ride (c) off road only, with the property owner's permission
- What type of starter system do most off-highway motorcycles use?
(a) Rope pull (b) Electric (c) Kick-start (d) Push button
- When your feet are on the footpegs, which part of your foot should be in contact with the peg?
(a) the heel of your foot (b) the ball of your foot (c) none (d) the arch of your foot
- When mounting a motorcycle, you should take care:
(a) not to step on the shifter (b) not to touch the handlebars (c) to shift your weight
- While shifting, you should:
(a) always close the throttle (b) gently ease the throttle to one-third of your speed (c) keep the throttle on

Practicing Your Riding Skills

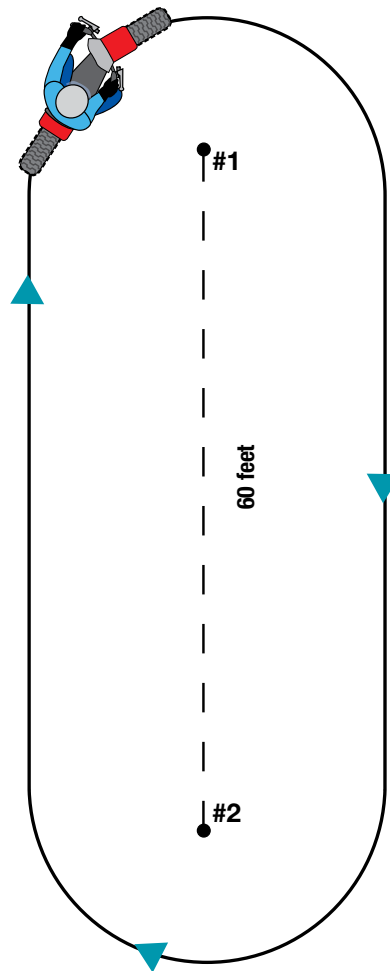
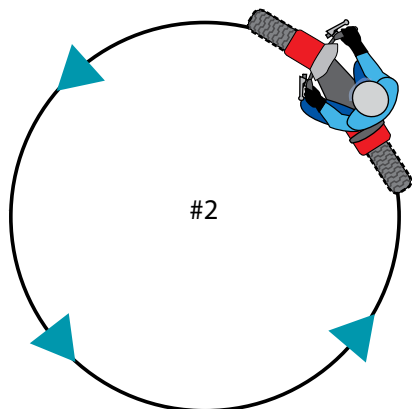
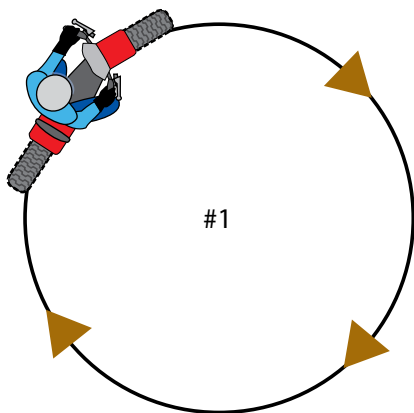
Locate a safe, unchallenging area to practice your riding skills. Walk the area first to make sure there aren't any unseen hazards that could trap tires, such as dips and holes.

All exercises may be practiced after you receive your Idaho Education Certificate.

Turning in a Large Oval

Turning a motorcycle isn't simply a matter of turning the handlebars. You need to shift your weight to avoid losing control. To practice, place two markers 60 feet apart and ride around the oval in first gear and in both directions. Remember to keep both feet directly on the footpegs. Also keep your eyes on your path of travel.

1. As you approach the turns, reduce your speed.
2. Initiate the turns with lower body input. Increase the weight on the inside footpeg. Increase the pressure with your knee on the outside of the gas tank.
3. Lean forward and into the turns.
4. As you come out of a turn, increase your speed gradually.



Turning in Small Circles

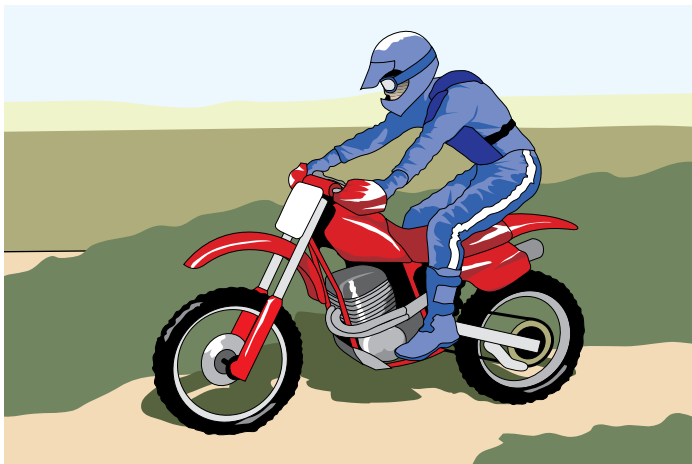
Turning a motorcycle in tight corners or circles requires more rider input. Follow the same procedure for turning in a large oval. However, in the turn, you will need to counterbalance your motorcycle by leaning your weight to the outside of the turn as you continue to apply lower body pressure on the footpeg and gas tank.

Making Quick Stops

There may be times on the trail when you need to stop quickly and do not have time to downshift, such as when another motorcycle or pedestrian is coming towards you on the same trail. By always looking ahead, you will be prepared to react quickly. By always travelling at safe and reasonable speeds and following the other safety precautions in this manual, you will always be in control of the motorcycle. As soon as you recognize the need to stop quickly, you need to do several things all at once:

- Center your body to keep the motorcycle from turning left or right.
- Keep the handlebars straight to keep the motorcycle from turning.
- Move back as far as possible on the seat. Keep your body low, and don't stand up. Lock your knees and arms to prevent you from going over the handlebars.
- Apply rear brakes only or front and rear brakes evenly. Do not apply front brakes only.

Practice making quick stops at various speeds you feel are comfortable. Do not operate at speeds greater than the maximum speed at which you can stop safely.



Crossing Roads

Some motorcycles are made for off-road use only. However, you may find it necessary to cross a road on occasion. This is common in farm areas where a motorcycle is used for various work purposes. A leading cause of accidents and fatalities for motorcycle riders is from riding on or crossing the road illegally. The hazards of crossing a road cannot be overemphasized.

Laws governing motorcycle operation and highway crossings should be consulted before you attempt any road crossings. General knowledge of all motorcycle laws is a must for all motorcycle users.

Besides using common sense, caution, and courtesy, you also must obey the laws of your state when crossing a road. To cross a road safely, use the following procedures.

1. Bring your motorcycle to a complete stop on the shoulder of the road.
2. Yield the right-of-way to all oncoming traffic. Look both ways.
3. Cross at a 90-degree angle at a place where there are no obstructions and your visibility is good.

Remember, crossing a road or illegally riding on the road is a major cause of serious accidents or fatalities of off-highway motorcycle riders, so use extra caution.

OHM Learning Activity—Self Quiz

Decide whether each statement is true or false. Circle T or F.

- | | | |
|---|---|--|
| T | F | 1. While making quicker turns, lean the upper body to the outside of the turn. |
| T | F | 2. For the best control, the ball of your foot should be in contact with the footpeg when your feet are resting on the footpegs. |
| T | F | 3. To turn at low speeds, shift your weight away from the turning direction. |
| T | F | 4. You should brake excessively while cornering so that you won't plow ahead. |
| T | F | 5. When making turns at low speeds, you should maintain the throttle. |
| T | F | 6. While turning, it is necessary to look ahead at your intended travel path. |
| T | F | 7. The best way to do a quick stop is to shift to a lower gear and apply both brakes. |
| T | F | 8. Shifting body weight smoothly and quickly is an integral part of the fun of motorcycle riding. |

Chapter 9

Intermediate Riding Skills

Objectives:

- Learn how to climb a hill.
- Understand the method for descending a hill properly.
- Learn the techniques used when traversing a slope.

You have to know your terrain and what your machine's capabilities are to get the most out of the ride. Choose the places you ride carefully. Use existing designated trails. Avoid terrain like dangerous slopes and impassable swamps. Watch carefully for sharp bumps.

Improving Your Riding

Learn to read the trail as you ride. An expert rider looks well ahead on the trail. Know what's coming; be prepared to react long before you get there. Be alert constantly for hazards. Don't ride in situations beyond your capabilities. Know how to adjust your speed to trail conditions and visibility. An expert rider avoids trouble simply by handling the machine well, by being safe, and by avoiding risky situations in the first place.

Climbing a Hill

Remember:

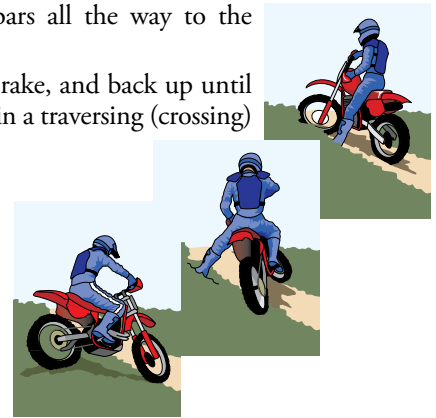
- Some hills are too steep for your abilities. Use your common sense. If it looks too steep, it is.
- Some hills are too steep for any motorcycle, regardless of your abilities.
- Never ride past your limit of visibility—if you can't see what is on the other side of the crest of a hill, slow down until you can get a clear view.
- The key to being a good hill rider is to keep your weight uphill at all times.

When approaching a hill:

1. Keep both feet firmly on the footpegs.
2. Shift the motorcycle into a low gear and speed up BEFORE ascending the hill.
3. For small hills, shift your body weight forward by sliding forward on the seat. For steep hills, stand on the footpegs and lean forward of the gas tank in order to shift as much weight forward as possible.
4. If the hill is steep and you must downshift to prevent stalling, shift quickly and smoothly. Also, don't forget to close the throttle while shifting. This will prevent the front wheel from lifting.
5. If you don't have enough power to continue uphill but you have forward momentum and enough space to turn around safely, turn before you lose speed and then proceed downhill. Keep your weight uphill.

If you are riding up a hill and you lose forward momentum:

1. Apply the brake before you roll backward.
2. Turn the handlebars all the way to the left.
3. Pump your rear brake, and back up until the motorcycle is in a traversing (crossing) position.
4. Walk the front tire around by moving the handlebars from left to right until the motorcycle is pointed downhill.



5. Keep your weight uphill at all times and push off.

Riding Across a Hill

Traversing a slope means to go across it. Often when a hill is steep, it is necessary to climb it by traversing. The same is true when descending a steep hill—if it's unsafe to go straight downhill, traversing the hill from side to side is necessary.

Traversing a slope is tricky. Use caution and avoid traversing slopes where there is slippery or bumpy terrain. Here are some basic guidelines to follow.

1. Lean the motorcycle uphill. How far you lean uphill depends on how steep the slope is.
2. Keep both feet firmly on the footpegs, but shift your weight to the uphill footpeg.
3. Stand on the footpegs while pressing the handgrips into the hill with steady pressure. This increases traction by forcing the tires into the hill. At the same time, it keeps your body weight straight up and down.
4. Always maintain steady throttle control.
5. If you begin to lose control, simply let the motorcycle go; step off on the uphill side. Leaning the motorcycle uphill lets you lay it down uphill so that the wheels slip out from under you. Never get off on the downhill side; you risk having the motorcycle fall on top of you.

Descending a Hill

When descending a hill:

1. Keep both feet firmly on the footpegs.
2. Point the motorcycle directly downhill.
3. Transfer your weight to the rear.
4. Shift the transmission into low gear, and descend with the throttle closed.
5. Apply rear or both brakes to reduce speed. Do not use front brakes only; or the motorcycle will flip forward, throwing you off or landing on top of you.

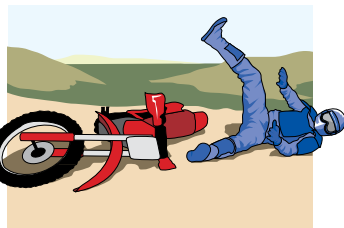


Learning to Fall

The idea of falling from your motorcycle is scary! Over time, all riders fall at least once. Learning to fall the right way can help you prevent serious injury.

One way to keep from getting hurt when you fall is called the “tuck and roll.”

1. Tuck your body into a ball-like position and roll as you hit the ground.
2. Land on a part of your body that is protected by pads.
3. Roll with the fall to absorb the shock.
4. Try not to extend your hands to break your fall.
5. Protect your arms and legs as you hit the ground. Keep them away from the motorcycle.



Although the tuck and roll can help you avoid serious injury in an accident, its effectiveness is limited by the terrain on which you are riding.

Riding on Different Types of Off-Highway Surfaces

Off-highway motorcycles are ridden on sand, dirt, mud, snow, rock, and gravel. All of these surfaces affect the motorcycle's traction. Your motorcycle will handle differently on each surface.

Traction: When riding on surfaces with poor traction, you are more likely to fall on uneven surfaces. Remember this rule: Good traction = good handling, but poor traction = poor handling.

Different surfaces create different kinds of traction for the motorcycle. It can be difficult to ride on gravel or loose dirt, mud or wet dirt, sand, ice or snow, and loose rocks. To ride safely on these surfaces:

1. Reduce your speed. Slow down before you reach a slippery surface. Your motorcycle needs more distance to stop on slippery surfaces. You want to prevent skidding and losing control.
2. Avoid sudden moves. On wet or slippery surfaces, any sudden change in speed or direction can cause a skid. Gradually reduce speed, shift gears, turn, and brake.
3. Use both brakes. Use the front brake as well as the rear brake. When using both brakes, be sure not to lock the wheels. Remember not to squeeze the front brake lever too hard. The front brake is still the most effective one to use on low-traction surfaces.
4. To stop your motorcycle quickly when traction is poor, also apply both brakes. Do not grab at the brake; apply it steadily and firmly. Apply the front brake as hard as you can without locking the front wheel. At the same time, apply the rear brake firmly.

5. Do not apply the brakes in a turn. If you need to stop quickly while turning, apply the rear brake firmly without locking up the rear tire. As the motorcycle's front wheel straightens out, apply the front brake firmly. Remember, if the front or rear wheel locks up when the motorcycle is turning, the wheel can slide out from under you and you may fall over.

Sand: Most riders are careful on sand because the motorcycle feels unstable. In sand, skim the front wheel across the sand using power and rear weighting. As you increase your speed, the motorcycle's front wheel begins to skim the sand surface. At this point, shift your weight to the rear of the motorcycle. Standing on the footpegs helps you shift your weight.

Increasing your speed gradually will allow the front wheel to “wander” left or right as it skims the surface. This is similar to the way a boat or slalom water-skier “skims” across the water using the back of the boat or ski to steer. A motorcycle rider planing over sand can steer the rear wheel by his or her shifting weight on the footpegs.

Learning to skim over the ground takes practice, but it is an important skill to learn. Using a lighter touch on the handlebar also may help you control your motorcycle over different kinds of terrain.

Slippery surfaces: Keep your motorcycle straight up and control your speed. Sometimes you may need to put your foot down, skimming the ground to keep your balance. Be careful of hidden objects such as stumps or rocks when you are skimming the ground with your foot.

Uneven surfaces: This is the most common type of off-highway terrain. To ride over uneven terrain, rise slightly off the seat with your weight on the footpegs. Bend your elbows slightly to absorb shock. This position will put you in the best position for weight transfer and balance.

Obstacles: The suspension on most motorcycles can handle small obstacles. Rider skills are needed for larger obstacles. To cross an obstacle, raise the front wheel over the obstacle and let the back wheel climb it. This is called “lofting.”

To loft the front wheel, stand on the footpegs with your weight slightly back. Push down on the handlebars and then lift them. The front wheel will bounce up much like a ball would. Be careful not to give the motorcycle too much throttle. Do not try to loft over obstacles higher than the motorcycle's axle.

Jumping over obstacles is a very advanced skill. It will not be taught in this course. Skills like this take many hours of hard practice. Do not try to jump your motorcycle until you are an experienced rider.



Riding at Night

You and your motorcycle are hard to see at night. Your motorcycle has only one headlight. Follow these safety tips for riding at night.

- Always use your lights.
- Slow down. If you come upon an obstacle or unfamiliar terrain, slower speed gives you more time to react.
- Increase the distance between you and other riders in front of you.

In the skills module of this course, you must demonstrate and perform correctly the following skills:

- Mount
- Dismount
- Start and turn off motorcycle
- Stop (slow and emergency)
- Travel in a straight line
- Turn (circles, figure eights, sharp turns, quick turns)
- Travel up and down hills; turn on hills; traverse hills
- Riding position
- Hand signals (right, left, slow, stop)
- Negotiate stop signs and intersections
- Cross obstacles
- Ride on trails

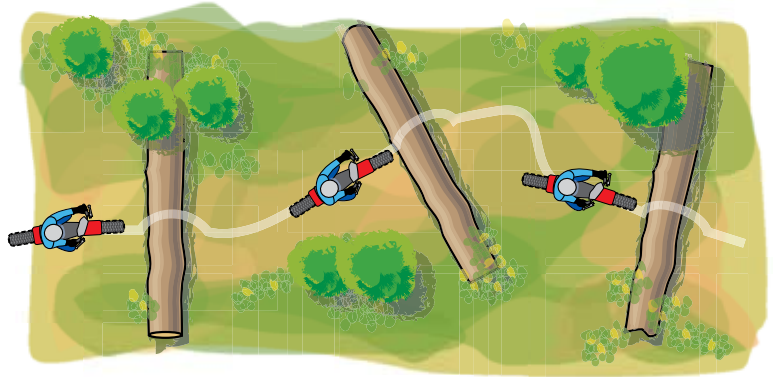
OHM Learning Activity—Self Quiz

Circle the letter which best completes the sentence.

1. Turning your motorcycle involves shifting your weight, braking, maintaining throttle control, and shifting gears. (a) True (b) False
2. When slowing down, what else should you do when braking? (a) Downshift (b) Upshift (c) Increase gas (d) Lean (e) a, c, and d
3. What is involved in riding your motorcycle downhill? (a) Keeping your weight to the rear and uphill (b) Keeping your weight forward (c) Braking (d) Maintaining throttle control (e) a, c, and d
4. When riding your motorcycle in sand, slightly increase your speed and shift your weight forward, allowing the front wheel to skim over the sand. (a) True (b) False
5. When riding your motorcycle on uneven, wet, or slippery surfaces, what simple rules should you follow? (a) Reduce speed, avoid sudden moves, and use front brake (b) Reduce speed, avoid sudden moves and use both brakes (c) Increase speed, avoid sudden moves, and use rear brake (d) Increase speed, avoid sudden moves, and use front brake
6. Traversing a hill involves a weight shift: (a) to the downhill side (b) to the uphill side (c) forward, to the uphill side, and then to the rear
7. When climbing hills you should: (a) speed up before climbing the hill and shift into a higher gear (b) speed up before climbing the hill and shift into a lower gear (c) shift your body weight backward and shift into low gear
8. When going down hills, you should: (a) transfer your weight by leaning forward (b) transfer your weight equally to both footpegs (c) transfer your weight to the back of the motorcycle
9. To prevent front-end lifting while climbing a hill, you should: (a) close the throttle while shifting (b) lean on the uphill footpeg (c) transfer your weight forward
10. When on hills, keep your weight: (a) uphill (b) downhill (c) in the center
11. If you can't see what is on the other side of the hill, you should: (a) slow down until you can get a clear view (b) stop, dismount, and check it out first (c) both a & b, depending upon how steep the hill is
12. If you have to dismount when climbing a hill, you should always dismount on the: (a) downhill side (b) uphill side (c) to the rear
13. When riding over an obstacle: (a) lock your knees and elbows (b) go as fast as possible (c) stand on the footpegs and keep your knees and elbows flexed
14. Which of the following would be the right thing to do when trail riding? (a) Ride off the trail to see how many plants you can run over (b) Chase wildlife (c) Be courteous and stay on approved trail (d) Get angry with horseback riders because they should not be on the trail

Exercise — Rocks, Logs, and Bumps

1. Locate three logs about four to six feet long, no more than 10 inches in diameter. Place them 35 feet apart. You will be driving the motorcycle over each of these logs, one at a time.
2. Begin at least 25 feet from the first log, and accelerate to second gear.
3. As you approach the log, stand up, keeping your knees and elbows flexible and bent. Lean forward slightly. Keep the front tire at a 90-degree angle to the log.
4. Apply a small throttle burst just as the front tire touches the log to keep your momentum as you go over the log. Lean forward further as the rear tires go over the log to prevent being hit by the seat or the rear of the motorcycle.
5. Keep your head up, and prepare to go over the next log.



Chapter 10

Different Terrains

Objectives:

- Realize there are differences in handling a motorcycle on different terrains.
- Learn how to ride through water safely.
- Know basic hand signals.

When you feel you have safely mastered the skills for climbing and descending hills and traversing slopes, the next task is to learn about the types of terrain on which you can ride. In this chapter, we will discuss various types of terrain from riding in water and mud to dune and snow riding. Your state may not have all of these terrains, but it is wise to know how to ride through them safely.

Reading the Lay of the Land

Always look well ahead of you by scanning the trail before you. Keep your eyes moving, looking where you want to go. Sometimes people have a tendency to focus on a point just ahead of the front wheel. If an obstacle comes up, there is not enough time to avoid it. Instead of focusing on the road just ahead, there is a good rule of thumb to follow.

At any given speed, you should be looking that many yards ahead. For example, at 30 mph you should be looking 30 yards ahead.

By looking far enough ahead of you, you'll be able to pick the best paths over and around obstacles, anticipating when to slow down. If you approach a hazard, you will not need to look directly at it. Instead, by having scanned ahead, you will be aware of its presence as you avoid it. You should always be scanning ahead for the next obstacle.

Body positioning is also very important. At times, you may need to take weight off the rear by leaning far forward; while at other times, you may need to sit directly over the rear to gain traction. You also may need to rock the vehicle from side to side to work the motorcycle out of a hole. By scanning ahead, you will rarely need to look directly in front of your front wheel.

There are good phrases to remember when reading the lay of the land. They are: scan the area, evaluate what could/will happen, and execute your decision to avoid the hazard.

SEE

You should know how to use the SEE process as a system for safe riding strategies and how you can apply the process in different situations.

<h3>SCAN</h3>	<ul style="list-style-type: none"> • Look far ahead (sight steering). • Don't focus on any one obstacle (target fixation). • Observe visible and partially hidden obstacles, surface composition, other trail users and wildlife, and stationary objects.
<h3>EVALUATE</h3>	<ul style="list-style-type: none"> • Adjust your handling. • Think about whether a collision or fall could occur.
<h3>EXECUTE</h3>	<ul style="list-style-type: none"> • Pick a good path with good traction, visibility, and a minimum of obstacles. • Adjust your speed. • Adjust your technique.

Riding Through Water and Mud

Your motorcycle is designed to be ridden in water and mud, but some precautions must be taken. When riding through water, you should keep your feet firmly on the footpegs. Smaller motorcycles can be submerged up to about eight inches; larger motorcycles up to twelve inches. Always check your owner's manual to find out the maximum depth through which your motorcycle can travel.

Choose a course through a stream where both banks have a gradual incline. Try to cross at a known ford, or where you personally know it is safe. Safely determine the depth of the water or mud before riding through it. A clue is the grass height or rocks emerging from the surface. Use a stick to determine depth. Be careful of swift-moving water.

Proceed at a slow, steady speed to avoid submerged obstacles and slippery rocks. Dry the brakes after crossing by applying light pressure to them while riding until they return to normal power.

Avoid water crossings where you may cause damage to stream beds, fish spawning grounds, or erosion to the banks of the stream. This precaution not only ensures your own personal safety, but preserves the environment for others to enjoy as well.

Don't ride too fast. Water and mud slow the vehicle quickly and could cause you to lose control if you approach too fast. Try a moderate speed with higher than usual rpms.

When traction is low as in mud or snow, allow the tires to rotate at a speed that allows them to bite. Don't rev the engine up thinking you'll go faster—you won't. Watch for mud buildup.

After riding in water, be sure to drain the trapped water by removing the drain screw. Refer to your owner's manual for the exact position of the drain screw. Wash the machine with fresh water if you have driven your motorcycle in salt water.

Riding in Snow

Riding in snow requires that you learn to interpret snow conditions correctly to pick the best riding areas. There is less traction than in dirt, so start slowly and progress gradually until you know the limits.

On firm snow, you can have a great time and cause no problems. In soft snow under the wrong conditions, your ride can be a disaster. Motorcycles do not work well in slushy snow. Be aware that a frozen trail may be nice at the start of a ride in the morning; however, by early afternoon when you may be many miles out, the trail could be warm from the sun and become nearly unusable by motorcycles.

Know the weather conditions and the weather forecast. Having to push your motorcycle through snowdrifts is no fun. Careless winter riding can spoil things for you and everyone else. Snowmobilers can get pretty upset and rightfully so when motorcycles run in slushy snow and ruin their carefully groomed trails. Landowners get upset when they have given permission for snowmobile trails and find others on them.

You can prevent these problems by choosing the snow conditions carefully. Know who owns the land where you ride. Get to know your local snowmobilers. If there are snowmobile clubs in your area, get to know them, too. By working together, you can help to preserve riding opportunities for you and fellow outdoorsmen.

You also need to change your transmission oil to a lighter weight when you ride in the snow. Refer to your owner's manual for the manufacturer's recommendation about preparing your motorcycle for cold weather.

Trail Riding

Be careful when going from a sunny to shaded trail. Rocks or ruts may be less visible in the shade, and your eyes cannot adjust quickly enough to see them. Gradient lenses for your goggles will help this condition.

Most properly designed trails are outsloped to allow rain to run off the surface. This means your motorcycle may be more likely to tip, and you will need to keep your weight shifted into the hill.

Plan your ride. Don't travel a trail beyond your capabilities. Always ride within your limits. Remember that one short difficult section on an otherwise easy trail would put the trail beyond your capabilities. Standing up on the footpegs slightly will aid your ability to take on rough terrain. Always be prepared to meet oncoming traffic since most trails allow two-way travel. Maintain a safe distance between your motorcycle and those of others in your group. Following too closely can cause rear-end collisions.

Night riding requires extra caution. Nighttime is the most dangerous time for riding your motorcycles. Be sure your lights work properly. Never "overdrive your headlight." You always should be able to stop within the length of the headlight beam. Slow down and avoid unfamiliar terrain. Carry a flashlight. Never travel alone.

Speed and Handling

No matter how experienced you are, a motorcycle can go only so fast over rough terrain. Never operate your motorcycle at an unreasonable speed for the conditions. Many operators who have been involved in accidents claim that they lost control of their vehicle. They were going too fast for conditions to maintain control of their vehicle.

When you ride too fast, you risk the chance of crashing and hurting yourself or someone else. Others will perceive you as a reckless rider. Your reckless actions reflect on all motorcycle operators and lead to a poor image of motorcycle riders. Being a good rider means being safe, being responsible, and knowing your limitations as well as the limitations of your vehicle.



Dune Riding

Dune riding offers great thrills and fun, but certain safety precautions are necessary to enjoy this type of terrain fully. Your motorcycle should be equipped with an antenna flag so that others can see you. The antenna and safety flag should be at least ten feet from ground to tip (with the tip lighted at night).

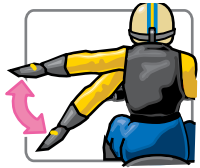
Assume that wet sand is soft and could be quicksand. Do not attempt to cross unless it is a known, safe place.

Avoid vegetation because it helps stabilize the dunes and may hide an obstacle or hazard. Be aware of razorback dunes which have a gradual incline on one side (usually the windward side) and nearly a sheer drop on the other side (leeward). Dunes shift in size and shape. Never assume that everything is consistent from one visit to the next.

Be extra careful when the sun is directly overhead because there are no shadows. Sunny days also produce a three- to four-inch heat haze on top of the sand. This may create the illusion that the sand is level where large bumps and holes exist. Travel slowly under these conditions.

Night riding on dunes demands extra caution. The best idea is to *slow down*.

When making a rest stop, always park at the crest of a dune.



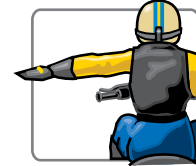
Slow Down



Stop

Knowing Hand Signals

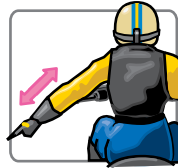
Traveling in a group requires communication. Make sure everyone in your group understands basic hand signals.



Left Turn



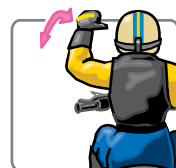
Right Turn



Hazard Left



Oncoming Traffic



Hazard Right

OHM Learning Activity—Self Quiz

Decide whether each statement is true or false. Circle T or F.

- T F 1. Always illuminate both a headlight and taillight while riding at night.
- T F 2. Motorcycles operate easily in slushy snow conditions.
- T F 3. The best place to park your motorcycle when making a rest stop is in the middle of the trail.
- T F 4. By looking far enough ahead, you should be able to pick the best paths over and around obstacles.
- T F 5. Larger motorcycles are designed to ford streams and creeks up to 20 inches in depth.
- T F 6. When riding in water, one good method to work your motorcycle out of a hole is to rock the vehicle from side to side.
- T F 7. Gradient lenses for your goggles are good for such trail conditions as moving from shaded to sunny areas.
- T F 8. Razorback dunes are easy to read.
- T F 9. Riding in snow requires that you learn to interpret snow conditions correctly to pick safe riding areas.
- T F 10. The Idaho Department of Parks and Recreation is in charge of the motorcycle education program in Idaho.
- T F 11. A safety flag should be attached to your motorcycle while on sand dunes.

OHM Performance Test

If you would like to test yourself to see how your skills are developing, take this performance test. Always perform the test with an observer who can point out areas when you need work.

The course used for the OHM Performance Test should be a dry, flat, off-road surface, free of obstacles. You also will need an obstacle at least 4"x4"x4', and five traffic cones or objects to use as cones.

Add other performance tests on braking and turning to test your skills further.

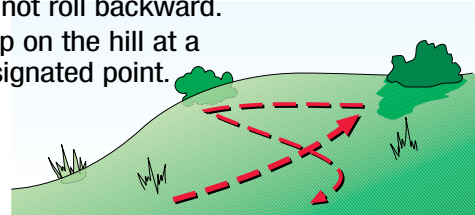
Test	Activity	Pass/Fail
1	Check for all safety clothing.	
2	Perform pre-ride inspection.	
3	Start motorcycle using start-up procedure.	
4	Show proper sitting position.	
5	Show proper standing position.	
6	Show proper hill-climbing position.	
7	Show proper hill-descending position.	
8	Show proper traversing-left position.	
9	Show proper traversing-right position.	

If you passed all nine tests, proceed to test 10.

Test 10

Turning and stopping on a hill—Begin going uphill toward the practice area. Start from 25' away.

1. Keep weight uphill.
2. Do not roll backward.
3. Stop on the hill at a designated point.



Test 11

Slalom—Using the cones in the center of the course, zigzag through them without knocking them down.

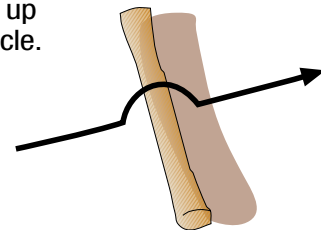
1. Do not hit cones.
2. Do not skip cones.



Test 12

Obstacle—Place the obstacle in a clear area, free of cones, and approach it at an angle. Allow no more than five feet from the starting point to where you encounter the obstacle.

1. Do not plow.
2. Do not hang up on the obstacle.



Part 3

Parents, Youngsters, and OHMs

Chapter 11 Parents, Youngsters, and OHMs

Objectives:

- Determine your youngster's readiness to ride a motorcycle.
- Learn the readiness checklist.
- Review steps for teaching safe and responsible motorcycle riding.

Determining Your Youngster's Readiness

The first important decision you will need to make concerning your youngster and motorcycles is whether your youngster is ready to ride. Physical size, strength, coordination, visual perception, emotional maturity, and the ability to reason and make good decisions are crucial.

There is no sure way to predict whether your child will be able to ride a motorcycle safely. However, the following guidelines can help you determine your youngster's readiness to ride. Only parents can decide if their youngster has the capabilities and qualities to operate a motorcycle safely.

Physical Development

Physical size and ability are important considerations. To help determine whether a youngster is big enough for a particular motorcycle, have him/her stand up on the footpegs and grasp the handgrips. While the youngster holds this position, check to make sure there is at least three inches of clearance between the motorcycle seat and the seat of the youngster's pants. A rider needs at least three inches of clearance to stand up for balance and comfort and to shift his/her body forward, backward, and from side to side.

Also make sure your youngster can reach and work all the controls comfortably. For example, can he/she turn the handlebars all the way to the right and left? Can he/she easily use their feet to

work the brake pedal and gearshift lever? Can he/she operate the throttle and brake levers while they hold onto the handgrips? If not, the youngster may not be able to maintain balance and control and is not physically ready to ride this motorcycle.

Athletic ability is another consideration for riding a motorcycle. Generally speaking, your youngster should be skilled at bicycle riding before he/she gets on a motorcycle. Can your youngster judge speeds and distances while riding a bicycle and react with proper hand and foot actions? Anyone who lacks good coordination, balance, and agility is not ready to ride a motorcycle.

Social/Emotional Development

Certain rules are necessary for the safe operation of any vehicle. A youngster needs to know about, understand, and follow rules. A good example is a youngster who obeys rules set by parents. A youngster who does not follow rules is not ready for a motorcycle.

Another indicator that youngsters are ready to ride a motorcycle is when they demonstrate safety-conscious attitudes and are aware of possible injury from reckless motorcycle operation. If the youngster has a habit of recklessness or is often involved in accidents while using bicycles or skateboards, the youngster is not ready to ride a motorcycle.

Reasoning and Decision-Making Ability

Youngsters should have some understanding about what may happen if they do something wrong. They must realize that unsafe actions can result in injury. An example of this is knowing to look both directions before crossing a street. The ability to make good decisions relates to a youngster's ability to reason. When presented with a problem, the youngster should be able to come up with a sensible answer. Ask your youngster to explain to you what causes accidents and injuries and how to avoid them. In general, a youngster should understand that he or she can get hurt as a result of making poor choices.

Visual Perceptions and Motor Skill Development

Visual perception and motor skill development pertain to how well a youngster sees and how vision is used with other physical movements. Can a youngster see an object and then react with proper hand, foot, and body movements?

Several types of sight-ability skills are important. The ability to see to the sides while looking straight ahead is called peripheral or side vision. You can determine a youngster's peripheral vision by having him or her look straight ahead while you move objects to their sides. The youngster should be able to see objects 90 degrees to the side while looking straight ahead. Rider awareness and safety improves with good peripheral vision.

Being able to judge distance is another visual skill helpful when operating a motorcycle. Is your youngster able to tell how far one object is from another, or which of two objects is closer? Motorcycle riding requires a person to judge distance and react accordingly.

Playing video games or being able to hit a baseball, for example, are good examples that a youngster's eye and hand movements are fairly well-coordinated.

Readiness Checklist

In summary, you must consider many things before you decide to allow your youngster on a motorcycle. There is no exact formula to use in making that decision. The readiness checklist below can assist you in evaluating a youngster. If you are not able to check off these statements, your youngster is probably not ready to ride a motorcycle.

Physical Development	
Ability	
<input type="checkbox"/>	Youngster is big enough for the motorcycle selected to ride
<input type="checkbox"/>	Youngster can reach and work all the controls comfortably
<input type="checkbox"/>	Youngster has developed skills to ride a bicycle including sufficient coordination, agility, and balance to ride a motorcycle
Social/Emotional Development	
Ability	
<input type="checkbox"/>	Youngster understands and follows rules
<input type="checkbox"/>	Youngster demonstrates safety-conscious behavior
Reasoning and Decision-Making Ability	
Ability	
<input type="checkbox"/>	Youngster has understanding of cause and effect
<input type="checkbox"/>	Youngster exhibits effective reasoning
Visual Perception/Motor Development	
Ability	
<input type="checkbox"/>	Youngster demonstrates sight-ability skills
<input type="checkbox"/>	Youngster can judge distances and react accordingly
<input type="checkbox"/>	Youngster has developed hand-eye coordination



Steps for Teaching Safe and Responsible Motorcycle Riding

Once you determine that motorcycle use is proper for your youngster, it is time to prepare yourself to be a good motorcycle teacher and supervisor.

STEP 1:

Educate yourself about motorcycle safety and proper riding techniques.

You must learn as much as possible about motorcycles in general and especially your youngster's motorcycle. You must be qualified to instruct and supervise your youngster. Therefore, you need to understand features of the motorcycle and its proper riding techniques. The best source of reference is the owner's manual supplied with the motorcycle. Read the owner's manual before you begin to instruct your youngster about motorcycle safety. Pay particular attention to the warning labels and stickers on the motorcycle. For a hands-on learning experience, consider taking the *Idaho Off-Highway Motorcycles Safety Course*.

STEP 2:

Teach your youngster about safety and proper riding techniques.

Teaching your youngster motorcycle safety is a step-by-step process. It begins with safety rules and moves to actual riding procedures. Since youngsters learn at different rates, it will be up to you to set the pace of your youngster's progress. At some point, you may decide that he or she is not ready to ride a motorcycle.

STEP 3:

Avoid unsafe situations through close supervision.

Always closely supervise your youngster's riding. This is necessary even if your youngster has learned and mastered the rules and skills of safe motorcycle riding. Youngsters can tire easily and become careless. They do not always see everything that is important around them. Your close supervision and good judgment are crucial.

STEP 4:

Let's start riding!

- For a hands-on learning experience, consider taking the *Idaho Off-Highway Motorcycles Safety Course*.
- Use the activities and lessons within this manual to review wearing protective gear and clothing, mastering the controls, naming the parts of his/her motorcycle, performing a pre-ride check (TCLOCS), and starting the motorcycle using FINE-C.
- Have your youngster practice mounting and dismounting. Correct riding posture helps your youngster operate the controls. Proper straight-line riding posture includes:
 - Head and eyes up, looking well ahead
 - Shoulders relaxed and back straight
 - Elbows bent slightly, out and away from the body
 - Hands on the handlebars
 - Knees in
 - Feet on the footpegs with toes pointing straight ahead
- Set up a learning area/riding area. The best place for learning is a level area at least 100 feet by 200 feet that is free from obstacles such as rocks, stumps, or holes. The learning area may have a loose or hard dirt surface. A grassy surface is also acceptable. It should not have two different surfaces. Be sure there is room enough to maneuver, you have checked with local land managers and are in a designated ride area, and no other riders are close by.

Final Note to Parents

We hope this section has helped you and your youngster take a safety-first approach to motorcycle riding. **All** motorcycle riders must use good judgment and be responsible. It is up to **you** to set a good example for motorcycle safety. You must help your youngster to ride sensibly and safely at all times.

Be sure that your youngster rides slowly over unfamiliar terrain to locate and avoid bumps, holes, and other possible obstacles. You should check the area first.

It is also recommended that you and your youngster read the information in the owner's manual. To find out more about rider education and safety programs offered by the Idaho Department of Parks and Recreation, visit our website at www.parksandrecreation.idaho.gov or call 208-334-4199.

OHM Learning Activity— Responsibility Discussion

The chart which follows asks questions about the laws in your state. Your instructor will help you find the laws to fill in the chart. Make sure you know these laws before you ride your motorcycle.

Check "Yes" or "No" for each question. If you answer yes, fill in the explanation under "Details."

In Your State	Yes	No	Details
1. Is there an agency in your state government in charge of motorcycle riding?			
2. Is registration of your motorcycle required?			
3. Is it illegal to cross roads?			
4. Is there a law about chasing animals on your motorcycle?			
5. Are helmets mandatory when riding an OHM?			
6. Is there a law concerning alcohol or drug use when motorcycle riding?			
7. Does the law require youngsters ages 8-15 to take a safety training course before they can operate on public land?			
8. Are headlights and taillights required on an OHM?			
9. Are brakes required on an OHM?			
10. Are you required to report an accident if there is personal injury?			

Answers to OHM Learning Activities

Self Quiz, page 10

1. F
2. F
3. T
4. T
5. T
6. F

Self Quiz, page 15

1. c (a helmet)
2. e (Tractor)
3. d (All of the above)
4. a (wind chill factor)

Self Quiz, page 23

1. a (return the choke to its normal position)
2. b (START or RUN position)
3. c (off-road only, with the property owner's permission)
4. c (Kickstart)
5. b (ball of your foot)
6. a (not to step on the shifter)
7. a (always close the throttle)

Self Quiz, page 25

1. F
2. T
3. T
4. F
5. T
6. T
7. T
8. T

Self Quiz, page 28

1. a (True)
2. a (Downshift)
3. e (a,c, and d)
4. b (False)
5. b (Reduce speed, avoid sudden moves and use both brakes)
6. b (to the uphill side)
7. b (speed up before climbing the hill and shift into a lower gear)
8. c (transfer your weight to the back of the motorcycle)
9. a (close the throttle while shifting)
10. a (uphill)

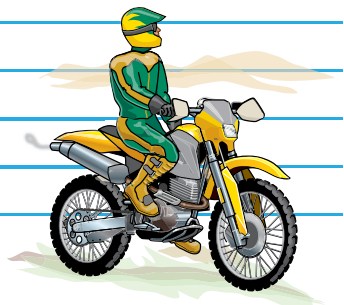
11. c (both a & b, depending upon how steep the hill is)
12. b (uphill side)
13. c (stand on the footpegs and keep your knees and elbows flexed)
14. c (Be courteous and stay on approved trail)

Self Quiz, page 32

1. T
2. F
3. F
4. T
5. F
6. T
7. T
8. F
9. T
10. T
11. T

Notes

A series of horizontal blue lines for writing notes, with a vertical blue margin line on the left side.



Glossary of Motorcycle Terms

A

ANTENNA FLAG—A 10-foot fiberglass pole topped with an orange triangular flag that is fixed to a motorcycle to improve visibility in hilly terrain, such as sand dunes. Also referred to as “whip antenna.”

AXLE—The drive rod on which the rear wheel turns.

B

BODY ENGLISH—A deliberate shifting of body weight and position by the motorcycle rider that is used to accomplish ordinary motorcycle maneuvers.

BRAKES—The parts of a motorcycle which allow the operator to slow down or stop the machine.

BRAKE LEVER—The hand brake located on the left handlebar. On some motorcycles the left handle is the clutch lever.

BRAKE PEDAL—The foot brake which is operated by the right foot.

C

CABLES—Heavy insulated wires. There are two kinds: mechanical and electrical. Brake cables are mechanical. The headlight cable is electrical.

CARBON MONOXIDE—A colorless and odorless poisonous gas. It is emitted from the exhaust pipe of a motorcycle when the engine is running. Breathing carbon monoxide can be fatal.

CARBURETOR—Device which feeds the engine the proper mixture of fuel and air.

CHOKE—A device which alters the mixture of gasoline and air supplied to the engine to provide the gassy mixture required for cold engine start-up.

CLUTCH—Device attached to the gear-change pedal which momentarily disconnects the spinning engine from the gears so that the gears may be shifted or changed.

D

DRIVE CHAIN—The chain which connects the engine to the rear axle to give a motorcycle drive or forward motion.

E

ENGINE STOP SWITCH—Switch used to stop the engine quickly without removing the hands from the handlebars.

ENVIRONMENT—All natural things in our surroundings, including air, land, water, wildlife, plant life, and people.

EYE PROTECTION—Goggles or a shatter-resistant shield worn over the eyes while riding to protect against dust, flying insects, small branches, or other debris. Such eye protection is also effective against bright sun or snow-glare conditions.

F

FLOODING—A condition which occurs in the engine when the cylinder fills with raw gas and fails to start. This condition usually resolves itself if the engine is allowed to sit quietly and drain.

FOOTPEG—Horizontal bar below the engine on which a motorcycle operator should rest his or her feet while riding.

FUEL VALVE—A valve, usually hand operated, with an on, off, and reserve position to control gas flow to the carburetor.

H

HANDLEBAR—The metal bar attached to the front end of the motorcycle which you hold with one hand at each end. Many of the controls for the motorcycle are located on the handlebar.

K

KNOBBIES—Tires with square rubber protrusions or knobs for good off-highway traction.

O

OFF-ROAD or **OFF-HIGHWAY VEHICLE**—Any vehicle, including a motorcycle, which is restricted by law from operating on public roads reserved for general motor vehicle traffic.

P

PLOWING—A condition in which the front wheel turns but the motorcycle continues straight ahead, causing the front tire to slide.

PSI—Pounds per square inch, the American unit of air pressure in the tires.

R

RAZORBACK (see Slipface)—A dune with a sharp edge. One side has a gradual slope, and the other has a steep, sharp incline.

READING THE TERRAIN—Looking well-ahead during off-road riding to anticipate hazards and choose the best path of travel.

RPM—Revolutions per minute, used to describe the engine speed.

S

SAFETY—The primary goal when operating a motorcycle. Safe operation of a motorcycle includes maintaining your vehicle in good condition, wearing the recommended protective clothing, and staying alert to terrain/trail conditions while riding.

SHIFT PEDAL—On those motorcycles equipped with a shift pedal, the device that allows the operator to change gears to suit the needs of the terrain. The shift pedal is operated by the left foot.

SHOW-OFF—A careless, thoughtless rider who operates a motorcycle without regard for the personal safety or private property of others—usually for the main purpose of attracting attention.

SLIPFACE—A hazard peculiar to sand dunes. A very steep slope that occurs on the side of the dune opposite from the prevailing wind. Generally, it is hard to see from the windward side of the dune.

SPARK PLUG—A user-servicable part within the engine which provides the spark for ignition of the gassy mixture in the cylinder.

SWITCHBACK—A sharp curve that leads into a sharp curve in the opposite direction.

T

TAILPIPE—That part of the exhaust system which expels waste gases.

THROTTLE LEVER—The lever operated by the right thumb which controls the engine speed.

TRACTION—Tread friction between the ground and the tires.

TRANSMISSION—The series of gears, shafts, belts, chains, and sprockets used to transmit force from the engine to the wheels and make the motorcycle move.

W

WEIGHT TRANSFER—The temporary change in weight distribution which occurs during maneuvering.

OHM Resources



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Colorado State Parks

**OFF-HIGHWAY
VEHICLE PROGRAM**
OHV registration information:
Colorado State Parks
13787 S. Highway 85
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303-791-1920
www.parks.state.co.us



WASHINGTON STATE DEPARTMENT OF Natural Resources

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360-902-1004
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Montana Fish, Wildlife & Parks

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1594 West North Temple #116
Salt Lake City, UT 84114
1-800-ATV-RIDE
www.stateparks.utah.gov



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