



# *Owner's Manual*

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### MODELS COVERED

This Owner's Manual covers the following 49.5cc mopeds: Agility, Adventure, Force, Raptor, Neo, and Victoria.

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## SAFETY

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### Your Moped and You

Congratulations on your new Cruze moped! If you ride safely and maintain your moped, you will enjoy many miles of happy riding.

### Safety

1. Read this manual completely before operating your moped.
2. Inspect your moped before riding.
3. The rider should possess the type of license required by local regulations.
4. Obey traffic regulations.
5. Ride defensively and maintain a safe distance from other vehicles.
6. Wear bright clothing so other drivers can see you.
7. Don't cut into other lanes or weave. Don't exceed the speed limit or ride faster than is safe for the road conditions. When it is raining, the road surface may be slippery - reduce speed.
8. Be aware of the weather and road conditions. Wet roads can be very slippery, especially painted lines. Braking distances will be significantly longer.
9. Use turn signals or hand signals when turning or changing lanes.
10. Use caution when riding through intersections and entering/exiting parking lots

11. Ride with both hands on the handlebars and both feet on the footrests. Passengers should hold onto the passenger handles securely and keep both feet on the footrests.

### Protective Apparel

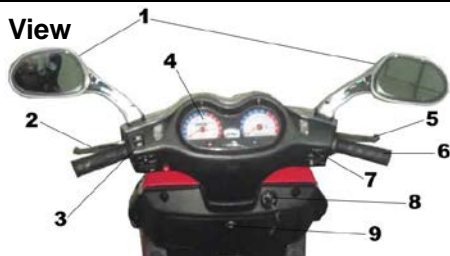
The operator should wear protective apparel, such as a DOT-approved helmet, gloves, and eye protection. Passengers should also wear a helmet. Refer to local regulations. Loose clothing should not be worn. The exhaust system gets very hot during operation - do not touch the exhaust pipe when hot. The operator and passenger should wear trousers and shoes/boots that protect ankles and feet.

### Loads and Accessories

1. The total weight of the operator, passenger and luggage should not exceed the maximum load of the moped (See: Specifications). The maximum load for the storage compartment beneath the seat is 22 lbs. The maximum load for the rear luggage rack or box is 10 lbs.
2. Items carried on the rear luggage rack should not block the taillight. Keep the weight of items on the luggage rack low and close to the centerline of the moped. This weight distribution will make it easier to control the moped.
3. Adjust the tire pressure according to the weight of items being carried and driving conditions.
4. Luggage should be secured to the moped and checked frequently to ensure it has not shifted.

## 50-M30 MOPED

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## 50-M30 MOPED

### Locations of the Identification Numbers

The frame number (VIN) and engine number may be needed for registration. Depending on the model, the frame number is stamped or engraved on the front frame tube under the frame number cover and on a data plate. The engine number is stamped or engraved on a data plate located on the lower right side of the frame.



Please write down the numbers in the following boxes for future reference:

**Frame Number (VIN):**

**Engine Number:**

## CONTROLS AND INDICATORS

### Using this Manual

Unless otherwise noted, illustrations and descriptions are functionally representative of all 49.5cc Cruze mopeds.

### Ignition Switch

The ignition switch has three positions:



ON: Ignition is on, engine can be started, key cannot be removed.

*NOTE: Leaving the ignition on when the engine is not running will drain the battery. This can damage the battery.*



OFF: Ignition is off, engine cannot run, key can be removed.

“LOCK” STEERING LOCK: Locks the handlebars; key can only be removed when handlebars are turned to the far left.



### Keys

Your moped comes with two ignition keys. The ignition key unlocks the under-seat storage compartment on all mopeds. It also unlocks the front storage compartment and external fuel tank cap if your moped is so equipped.

### Instrument Panel

#### Speedometer (1)

Indicates speed of the moped

#### Odometer (2)

Indicates distance traveled

#### Tachometer (3) (If equipped)

Indicates engine RPM

#### Turn Indicator (4)

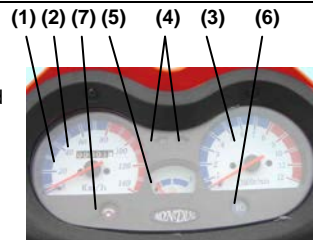
This light will flash when the turn signals are activated.

#### Fuel Gauge (5)

The fuel gauge indicates approximately how much fuel is in the tank. “F” indicates FULL. When the needle is in the red area, the moped is low on fuel.

#### High Beam Indicator (6)



This indicator illuminates when the high beam is used.



### Left Handle

#### Headlight Switch (1)

The headlights are always on.

Move the switch up to the  high beam position to turn on the high beam. Move the switch down to the  low beam position to use the low beam. Some mopeds are equipped with a spring-loaded high beam ‘flash’ switch.





## CONTROLS AND INDICATORS

### Rear Brake Lever (2)

To activate the rear brake, squeeze the lever on the left side in a controlled manner. The brake light in the taillight will illuminate.

### Turn Signal Switch (3)

Move the switch to the  left position to activate the left turn signal; Move the switch to the  right position to activate the right turn signal. *NOTE: The turn signals are not self-cancelling. Push the button straight in to "Cancel" the turn signals. Cancel turn signals after changing lanes or turning.*

### Horn Button (4)

Push to activate the horn.

### Hazard Light (5)

When parked at the side of the road, you can use the hazard lights to be more visible. The front and rear turn signal lights will flash. Not all models are equipped with a hazard light switch.

## Right Handle

### Electric Engine Start (2)

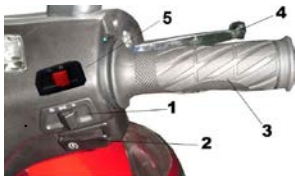
To engage the electric start, squeeze one of the brake levers while pressing the starter button

### Throttle (3)



Twist the throttle grip toward you to accelerate; release or twist away to slow down.

### Front Brake Lever (4)

Squeezing this lever operates the front brakes. Use the brakes in a controlled manner. The brake light in the taillight will illuminate when squeezed.



### Run ("Kill") Switch (5)

This switch must be in the "RUN" position  to start the engine and while riding. To stop the engine safely while riding, use your right thumb to move the switch to the "OFF" position . This switch can be left on – it will not drain the battery when the ignition is off.

## Fuel Cap

The fuel cap is located behind the seat on the Agility, under the seat on the Adventure, Raptor, and Neo, and near the footboards on the Victoria. Twist the cap counterclockwise to open. Twist clockwise to close. The Agility comes equipped with a locking fuel cap; use the ignition key to open it. The Victoria's fuel cap is located under a locking cover; use the ignition key to open the cover.



**Note:** Do not over-fill the fuel tank. There is a flat metal tab visible inside the filler neck. Do not fill above this tab. Do not spill gasoline on the engine when hot. Turn the engine off during fueling to avoid risk of fire.

## Kick Start

There is a kick-start pedal on the left side of the moped. Put the moped on its main stand before using. After starting the engine, fold the pedal back in.





## CONTROLS AND INDICATORS

### Rear Passenger Footrest

The passenger's feet should be placed on the rear footrests.



### Helmet/Bag Hook

Swing the lower part of the hook out to use. You can hang a helmet or *light* bag on this hook.



### Front Storage Compartment

Some models have a front storage compartment. Items should not exceed 3 pounds. Use the ignition key. To open, turn counter-clockwise and pull the door out. *Turn and hold the key* when closing.



### Under-seat Storage Compartment

Items such as a lock or helmet can be stored here. Use the ignition key; turn it clockwise and lift the seat to open. This compartment is close to the engine, so do not place items that can be damaged by heat here. Items should not exceed 20 lbs. Push the seat down firmly over the latch until you hear it click.



### Rear Luggage Rack

Small items or a box can be loaded on the rear rack. The load limit is 10 lbs.



### Stands

The moped comes equipped with a main stand and a side stand. To use the main stand, place your foot on the pedal extending from the stand, place your left hand on the left handlebar grip, use your right hand to hold the *metal* part of the luggage rack; rock the moped up and back by lifting from the luggage rack and stepping down on the main stand *at the same time*. The moped will rock onto its main stand.



To use the side stand, step on the foot pad welded to the side stand and swing it out into the down position. Gently lean the moped to the left until it is resting on its side stand. Cruze recommends using the main stand whenever possible to minimize the possibility that your moped could fall over.



**Note:** Make sure both stands are retracted before riding.

## OPERATION

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### Gasoline and Engine Oil

#### Gasoline/Fuel

Your Cruze moped features a four-stroke engine. It is designed to use unleaded gasoline with an octane rating of 93 or higher. Do NOT mix the fuel with engine oil. If the engine makes a knocking sound, the octane rating of the fuel may be too low. Most gasoline available in the US is E10, which means it contains 10% ethanol. Today's gasoline can go bad in as little as two weeks. Stale fuel can cause your moped to run poorly. Ethanol can clog the carburetor and cause the engine to run poorly. Ethanol attracts water, which can cause the engine to run poorly. Cruze recommends using an ethanol additive to stabilize fuel every time you fill up. If you are not going to ride your moped for a while, drain all the fuel from your fuel tank **and** the carburetor. Start the engine and allow it to run until it stops by itself.

#### Engine Oil

The engine holds 0.6 quarts of engine oil. Use high quality SAE 10W-30 or 10W-40 engine oil.

#### Gear (Hub) Oil

Use GL3 or GL5 gear oil.

### Break-in Period

The break-in period is critical to extending the life of your moped and achieving optimal performance.

#### Max Speed

Do not exceed the following speeds during the break-in period:

Break-in Distance (Miles)	0-100	101-200	201-500	501-1,000
Speed (MPH)	18	22	25	30

#### Avoid Excessively Low Speeds and Low RPM

Lubrication is most effective at higher engine RPM. Vary the engine RPM and avoid low speeds (below 18MPH). Within the first 500 miles, do not twist the throttle to the WOT (Wide Open Throttle) position, do not twist the throttle aggressively, and do not ride for long periods of time at WOT.

#### Warm Up

Allow the engine to idle until the oil has a chance to reach all parts of the engine and come up to normal operating temperature. Do not ride the moped or twist the throttle suddenly when the engine is cold. You will hear the engine RPM decrease after a few minutes. This indicates the automatic choke is operating properly.

## OPERATION




### Pre-Ride Inspection (PRI)

Item	What to Check for
Handlebars/ Steering	Turns smoothly lock to lock; Not loose
Brakes	Front and rear brake firmness; they should not feel soft or 'spongy'
Tires	Air pressure; Tire tread; Cracks or cuts
Fuel	Quantity; not stale or contaminated
Lights	All lights: headlights, instrument panel lights, taillight, brake light, license plate light, turn signals, and parking lights
Mirrors	Adjust for best view
Horn & Brake	Proper operation
Engine Oil	Oil level in 'normal' range when engine is cold
Throttle	Proper play in the throttle cable and grip; Grip twists freely and returns to idle when released

### Starting the Engine



**Caution:** Start the engine in a well-ventilated area.

#### 1. Using the Electric Start

- Insert the key into the ignition switch and turn it clockwise to the "RUN" position .
- Move the Run (aka "Kill") switch to the "RUN" position .
- Squeeze one of the brake levers (This is a safety interlock).
- Press the start button . If you have not ridden your moped recently, twist the throttle grip a few times first.

**Note:** Do not engage the starter for more than 5 seconds at a time. Holding it longer will drain the battery and could damage the starter motor. Release the start button once the engine starts. Do not press it while the engine is running. Allow the starter to cool after each use. If the engine does not start after multiple attempts, hold the throttle at 1/8 to 1/4 of full throttle and press the start button again.

#### 2. Kick Starting

- Put the moped up on the straight stand
- Turn the ignition switch to the "RUN" position .
- Move the "RUN" switch to the "RUN" position .
- Step down on the kick start pedal with your right foot smoothly
- It is not necessary to squeeze a brake lever when kick starting

**Caution:** Do not use excessive kicking force or stand on the kick start lever. The kicking motion should be parallel to the scooter. Do not let the engine idle for long periods of time. Air-cooled engines can overheat when not moving. Once the engine has reached normal operating temperature, ride it at normal speeds.

## OPERATION

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### Riding

If this is your first time riding a moped, take a rider training course or seek instruction from an experienced rider. A Rider Safety Presentation can be downloaded from the Cruze website. Find a safe, non-crowded area to practice. Become familiar with all controls and their operation.

It is the operator's responsibility to know and obey all traffic regulations. Riding with only one hand on the handlebars is dangerous - keep both hands on the handlebars and both feet on the footrests.

Do not brake when cornering. Slow to a safe speed before entering a turn. Be aware of road conditions; reduce speed on wet or sandy roads. Painted lines, such as cross-walks, and manhole covers can be extremely slippery when wet.

Twist the throttle toward yourself smoothly and release the brake lever at the same time. The moped will start moving forward. The speed can be adjusted by twisting the throttle grip: twist it toward yourself to accelerate. Twist away from yourself or release to slow down. Always use the appropriate turn signal or hand signal when riding on a road with other traffic.

**Caution:** Do not ride at speeds indicated by the red zone of the speedometer or tachometer. Do not twist the throttle too quickly – this could cause the tires to lose traction and result in the moped slipping or skidding.

### Riding on a Slope

1. When riding up a steep slope, the moped may slow down, particularly when carrying a passenger.
2. When riding down a steep slope, use the brakes to limit speed. On long hills, pull over occasionally to allow the brakes to cool.

### Braking

1. Twist the throttle away from yourself to the idle position to slow down and stop.
2. Simultaneously apply the front and rear brakes. Apply the front brake more than the rear in most circumstances.
3. Before stopping, consider the braking distance. Wet or slippery conditions require significantly longer braking distances.
4. After coming to a stop, turn the ignition key to the "Off" position to turn off the engine. To stop the engine while riding, use your right thumb to move the "Kill" switch to the "Off" position. Do not take your hand off the handlebars to touch the ignition switch.

**Warning:** The higher the speed, the longer the braking distance. Maintain sufficient distance from the vehicle or object ahead of you. Using only the front or rear brake is dangerous. This may result in a skid and loss of control. It will also increase the braking distance and cause rapid wear of the brake.

### Parking

Turn the handlebars all the way to the left. Push the ignition key in and turn it left to the "LOCK" position to lock the steering column. Gently wiggle the handlebars until the lock engages. Remove the ignition key.

## MAINTENANCE

Required Service Item	Interval					
	Miles	200	700	1,500	2,500	3,500
Months	1	3	6	12	24	36
Carburetor, Idle, Cable	I, A	I, A	I, A	I, A	I, A	I, A
Valve Clearance	--	I, A	--	I, A	--	I, A
Engine Oil	R	R	Replace every 500 miles			
Gear (Hub) Oil	--	R	R	--	R	R
CVT Belt	--	I	--	I	--	I
Brakes	I	I	I	I	I	I
Steering	I	I, T	I	I	I	I
Battery	--	I	I	I	I	I
Nuts, Bolts, & Fasteners	I	T	I	T	I	T
Air Filter	--	C	C	R	C	R
Fuel Filter	--	--	R	--	R	R
Suspension	--	I	I	I	I	I
Clutch & Variator	--	I	I	I	I	I
Front Shock Oil	--	--	--	R	I	R
Spark Plug	--	I	I, C	I	R	I, C
Main Stand, Side Stand	--	I	I	I	I	I
Tires	--	I	I	I	I	I
Lights	--	I	I	I	I	I

Key: I = Inspect, C = Clean, R = Replace, A = Adjust, T = Tighten

NOTE: It is the responsibility of the owner to ensure all maintenance is performed.

### Service Intervals

This chart lists the maintenance that must be performed after a certain distance or period of time, whichever comes first. Following this schedule will extend the life of your moped and improve its reliability, performance, and safety.

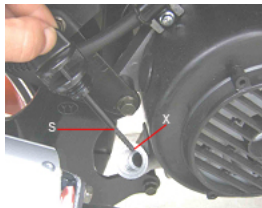
## MAINTENANCE

### Maintenance

Many components, such as the steering system, brakes, suspension, and engine, should be maintained carefully and require special equipment and procedures. These tasks should be performed by a certified technician at an authorized dealer. Your dealer can provide further information and replacement parts. All service must be performed by an authorized dealer during the warranty period.

### Engine Oil Level

Check the oil level regularly. Check it when the engine is cool. To check the oil level, place the moped on the main stand while on level ground. Remove the dipstick and wipe it with a clean rag. Insert the dipstick into the fill port *to the base of the threads*. Do not screw it in. Remove the dipstick and look at the oil level. It should be near the top of the normal range indicated by a series of 'X' marks. Add oil in small increments as necessary. *Note: Overfilling can damage the engine.*



### Changing the Engine Oil

Stand the moped on a flat surface on the main stand. The engine should be warm.

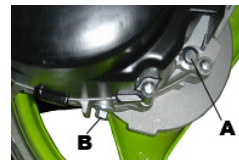
1. Remove the dipstick and clean it with clean cloth.
2. Put a container under the engine to catch the oil.
3. Remove the oil drain plug. Drain all of the oil. Clean the screen.
3. Reinstall the oil plug. Do not over-tighten.
4. Add 0.6 quarts of fresh oil and run the engine for one minute. Check the oil level. If low, add a small amount of oil and check again



### Changing the Gear Oil

The gear oil should be replaced at 700 miles and at 1,500 mile intervals thereafter. Use GL3 or GL5 gear oil.

- (1) Stand the moped on a flat surface on the main stand. The engine should be warm.
- (2) Remove the hub oil drain plug "B" and drain the used oil into a suitable container. Clean the drain plug and reinstall.
- (3) Remove the fill plug "A" and fill with 110ml of fresh gear oil. Re-install the fill plug.



## MAINTENANCE

**Note:** Check the gear oil level before and after driving long distances. Use the specified gear oil. Do not mix with other gear oils. Make sure that the drain plug is securely tightened, but do not over-tighten. Check the condition of the rubber O-ring. Be careful when draining oil from a warm engine - it may be hot.

### Carburetor

A clean and properly-adjusted carburetor is essential to engine operation. The carburetor mixture has been set at the factory. As the throttle cable stretches, it may be necessary to adjust it for proper play. The idle speed should be adjusted periodically depending on the ambient temperature, altitude, fuel, and condition of the engine.

### Throttle Cable Adjustment

1. Loosen the lock screw "1".
2. Turn the adjusting nut "2" to so that the cable has between 0.5mm-1.0mm of free play.
3. Tighten the lock screw and replace the rubber cover "3" to protect the throttle adjusting nut and lock screw.



### Idle Speed Adjustment

1. Start the engine and allow it to reach normal operating temperature.
2. Make sure the throttle grip is at the idle position. Adjust the idle speed screw "D" to between 1,400rpm and 1,600rpm, or so that the engine idles smoothly and does not stall.



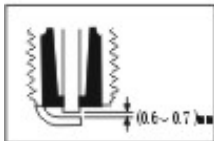
**Note:** After adjusting the throttle cable, check for proper throttle grip movement. The throttle grip should return to the idle position when you let go, with no increase in the idle speed of the engine.

## MAINTENANCE

### Spark Plug

NGK CR7HSA

1. Inspect the spark plug every 1,500 miles. Remove any carbon deposits with a wire brush or plug cleaner. Use a gap gauge to set the plug gap to 0.6-0.7mm.
2. When cleaning carbon deposits on the spark plug, observe the color on the porcelain tip. A light gray or brown color indicates proper operation.



**Note:** The spark plug provided is suitable for normal operating conditions. Using an incorrect spark plug can damage the engine. Do not over-tighten the spark plug. Use your hand to insert the spark plug and make sure the threads line up before using a socket wrench. When removing the spark plug, do not allow any dirt or foreign matter to fall into the engine through the plug hole.

### Removing & Cleaning the Air Filter

The air filter is located in a plastic housing on the left side of the moped. If it is dirty or clogged, it will reduce the amount of air available to the engine, causing the engine to produce less power. The filter core should be inspected and cleaned according to the service schedule. Clean and replace the core more frequently if the moped is used in a dusty environment.

#### To Remove the Filter:

1. Remove the plastic filter housing cover
2. Remove the filter element



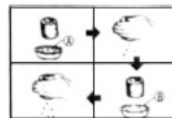
**Caution:** Do not start engine when the air filter is not installed.

#### To Clean the Filter:

1. Blow air through the filter core.
2. Pour a non-flammable detergent into a properly-sized container and immerse the sponge in the detergent.
3. Squeeze the sponge to get as much of the detergent out as possible. Do not wring it.
4. Immerse the sponge in engine oil. Then squeeze the oil out of it. It should still be lightly soaked with oil.
5. Re-assemble the air filter. Make sure there are no air leaks.



- A. Non-flammable detergent
- B. Engine oil



**Caution:** If there is tear or hole in the core, it should be replaced. Never use flammable solvents or gasoline to clean the filter.



## MAINTENANCE

### Brake System

Your moped has a disc brake on the front wheel and a disc or drum brake at the rear. Check the front and rear brake levers for proper firmness. If the brakes feel spongy or soft, the brake system may require servicing. The nut on cable-actuated drum brakes requires periodic adjustment as the pads wear and the cable stretches. *Do not over-tighten or the brakes will overheat.*

### Filling the Brake Master Cylinder Fluid Reservoir

The brake master cylinder on hydraulic disc brakes has a fluid reservoir. Check the brake fluid level window. If the level is low, loosen the two screws on the cover of the fluid reservoir, open the cover, and fill to the correct level. Do not allow dirt to enter the reservoir.



**Warning:** Use the grade of brake fluid indicated on the reservoir or slave cylinder. Do not mix. Only use fresh brake fluid. If the brake fluid reservoir requires frequent replenishing, there may be a leak in the system. Bring the moped to an authorized dealer for inspection.

### Bleeding the Brakes

When air is present in the brake lines, the brake levers will feel soft or spongy. To remove the air:

1. Squeeze and hold the brake lever
2. Loosen the air bleed screw "R" on the caliper. Bleed the air from the brake system.
3. Tighten the air bleed screw
4. Release the brake lever.
5. Repeat steps 1 to 4 until the brake lever is firm.
6. Replace the dust-proof cap that covers the drain air bleed screw.

Make sure the fluid reservoir does not get too low, or you will introduce more air into the system and have to start over.



### Replacing Brake Pads

A certain amount of squeal is normal. If the brakes make a distinct squealing noise under braking, or there are nicks on the brake disc, the brake pads may need to be adjusted or replaced. Both pads should be replaced at the same time, even when only one is worn to the limit.

## MAINTENANCE

### Tires

Check the tire pressure and tread depth regularly. Check for nails. Always replace tires when there is visible damage, such as broken tread, cracks, or cuts in the tire wall.



### Tire Pressure

Low tire pressure causes the tires to wear rapidly and can impair traction and handling. Over-inflation can reduce the contact area of the tire with the ground, which can cause loss of traction. Adjust tire pressure when the tires are cold. Refer to the data plate on the moped for the correct pressure.

### Tread

Driving a moped with worn tires decreases traction and may lead to loss of control. Replace the front tire when the tread depth decreases to less than 1.6mm. Replace the rear tire when its tread depth is less than 2mm.



### Battery

The battery is installed under the rubber floor mat or under the seat, depending on the model.

Clean the terminals with a metal brush when there is white powder. The bolts that secure the battery cables to the terminals should be tight.



If the moped will not be ridden for an extended period of time, the battery should be removed and stored indoors in a well ventilated place. Cruze recommends using a trickle charger to maintain your battery, especially in cold weather. Make sure the battery is fully charged before using.

### Fuse

The fuse is located in a white plastic holder near the battery. The rated current is 15 amps. Check the fuse if there is a sudden loss of engine or electrical power. A spare fuse can be stored inside the holder.

**Caution:** Use a fuse with the correct current rating. Do not use wire or other materials. If the fuse keeps burning out, there may be a problem in the electrical system. Contact an authorized dealer or certified technician.

## MAINTENANCE

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### Lights

1. Turn the ignition switch on and squeeze the front/rear brake levers to check that the rear brake light illuminates.
2. Push the turn signal switch in both directions and make sure the front and rear turn signals are working properly. Push the center of the switch to cancel.
3. Check the headlights and parking lights for proper operation.  
*NOTE: The headlights will not illuminate until the engine is running. They will go out when the engine is turned off.*
4. Check the instrument panel lighting.
5. Clean off any dirt on the lights and replace any broken parts.

### Bulbs

Bulb ratings are listed in the Specifications section. Use bulbs with the same rating when replacing. Different ratings may overload the wiring system and cause premature failure.

### Mirrors

When sitting on the seat, be sure objects to the rear and sides can be seen clearly. Clean the mirrors and replace any broken parts.

### Long-term Storage

1. Change the engine oil
2. Drain all the fuel from the fuel tank and carburetor. Start the

moped and let it run until it stops by itself.

3. Remove the spark plug and pour 15-20ml of Marvel Mystery oil into the cylinder. Turn the key to the "ON" position. Use the kick starter to gently turn the engine over several times. *Do not use the electric starter or start the engine.* Replace the spark plug.
4. Disconnect the battery and put it on a trickle charger.
5. Inflate the tires and place the moped on its main stand.
6. Clean the moped and cover it.

### Riding after Storage

1. Replace engine oil if the moped has been stored for more than four months.
2. Charge the battery and install/connect it.
3. Put fresh fuel in the tank. Cruze recommends using an ethanol additive.
4. Conduct a thorough pre-riding inspection and check performance while riding at low speed.

### Tool Kit

Your moped comes equipped with a tool kit. It is located in the storage compartment located under the seat.

## TROUBLESHOOTING



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### General

Refer to the following troubleshooting guide when you experience difficulty with the operation of your moped. Many of the steps required to resolve these issues should be performed by your dealer or a certified technician at an authorized dealer.

### Engine

#### Engine does not turn over when using electric start

1. Ignition switch not in  "Run" position
2. Kill switch not in  "Run" position
3. Brake lever not squeezed
4. Battery not charged sufficiently or connections loose
5. Fuse blown
6. Starter motor or bendix requires service

#### Engine turns over but does not start

1. Insufficient fuel or fuel filter clogged
2. Insufficient vacuum to actuate fuel petcock
3. Fuel tank vent line pinched or check valve not level
4. Battery not charged sufficiently
5. Spark plug cable loose or grounding out, spark plug fouled
6. Coil or CDI not operating properly
7. Loose or corroded connection at coil or battery
8. Engine flooded with fuel
9. Stale or contaminated fuel (ethanol), dirt in carburetor
11. Engine oil too heavy (winter operation)

#### Hard Starting

1. Spark plug fouled or spark plug cable loose or shorting out
2. Battery not charged sufficiently
3. Loose wire or cable connection at battery terminal or coil
4. Stale or contaminated fuel (ethanol), dirt in carburetor
5. Carburetor not adjusted properly
6. Coil or CDI not operating properly
7. Engine oil too heavy (winter operation)
8. Ignition timing not correct
9. Engine idle speed not correct
10. Low engine compression
11. Valve gap needs adjustment

#### Starts but does not run smoothly, stalls

1. Spark plug fouled or gap incorrect
2. Spark plug cable loose or shorting out
3. Battery not charged sufficiently
4. Loose or corroded wire or cable connection at coil or battery
5. Intermittent short circuit due to damaged wire connection
6. Stale or contaminated fuel (ethanol), dirt in carburetor
7. Fuel return vent line pinched or check valve not level
8. Coil or CDI not operating properly
9. Air filter clogged
10. Exhaust clogged
12. Low engine compression
13. Valve gap needs adjustment

## TROUBLESHOOTING

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### Pre-ignition or Detonation (Knocking or Pinging)

1. Incorrect fuel (octane rating too low) or incorrect spark plug
2. Ignition timing not correct

### Engine Overheating

1. Riding at low speeds for extended period
2. Letting engine idle while moped is sitting for extended period
2. Oil level low
4. Ignition timing not correct
5. Clutch or belt slipping

### Vibration

1. Suspension components worn or loose
2. Engine isolation mounts worn or loose
3. Frame or brackets broken
4. Wheels and/or tires damaged or not balanced

### Lubrication

1. Engine oil low
2. Oil Leaks: Loose bolts or seals/gaskets need replacement

### Electrical System

#### Battery not charging

1. Regulator/Rectifier not grounded or functioning properly
2. Engine ground strap loose or broken
3. Loose or broken wires in charging circuit
4. Battery damaged (e.g., bad cell, acid level low)

#### Alternator charge rate low

1. Poor battery condition
2. Excessive electrical load (too many electric accessories)
3. Loose or corroded terminals
4. Excessive idling or low speed riding

### Transmission

1. Belt worn or broken
2. Clutch work or broken
3. Variator worn or broken

### Brakes

1. Brake lever is soft:

Brake fluid level low or air in system (Disc brakes)

Adjustment nut needs to be tightened (Drum brakes)

2. Brake fade: Air inside brake system or excessive heat build-up from excessive braking or pads dragging
4. Brakes not effective: Pads worn out, rotor warped or out of alignment

**Note:** While under warranty, all service must be performed by the dealer.

## SPECIFICATIONS

Model: Adventure 50-M30	Specifications
Size (L x W x H)	1890mmx680mmx1120mm
Wheelbase	1350mm
Net Weight	200 lbs.
Max. Load	330 lbs.
Max. Speed	30 m.p.h. (48 Km/h)
Max. Slope	≥21°
Min Clearance	110mm
Max. Driving Noise	≤77 dB(A)
Fuel Tank Capacity	1.6 gal
Engine Oil Capacity	0.6 qt
Engine Oil	SAE 15W-40
Engine Model	YY49QMJ
Engine Type	Single cylinder, air-cooled, 4-stroke
Bore x Stroke	39mm x 41.5mm
Cylinder Displacement	49.6 ml
Compression Ratio	10.5 : 1
Max. Power / RPM	2.2 kw/7500 rpm
Max. Torque / RPM	3.2 Nm/6000 rpm
Ignition	CDI

Model: Adventure 50-M30	Specifications
Lubrication System	Pressure & splash
Starting Method	Electrical start / kick start
Spark Plug	CR7HSA
Clutch Type	Dry and automatic
Tires	Front: 130/60-13 Rear: 130/60-13
Brake Type	Front: Disc; Rear: Drum
Suspension	Front: Spring liquid flex Rear: Spring oil damp
Headlight	12V 35W/35W
Parking Light	12V 3W
Turn Signals	12V 5W / 21W
Taillight / Brake Light	12V 5W / 21W
Instrument Panel Light	12V 3W
High Beam Indicator	12V 3W
Turn Signal Indicator	12V 3W
Cell Phone Indicator	12V 3W
Fuse	15A
Horn	12V 3A 105dB(A)

## SPECIFICATIONS

Model: Agility 50-M30	Specifications
Size (L x W x H)	1660mmx680mmx1070mm
Wheelbase	1195mm
Net Weight	185 lbs.
Max. Load	220 lbs.
Max. Speed	30 m.p.h. (48 Km/h)
Max. Slope	≥21°
Min Clearance	110mm
Max. Driving Noise	≤77 dB(A)
Fuel Tank Capacity	1.1 gal
Engine Oil Capacity	0.6 qt
Engine Oil	SAE 15W-40
Engine Model	YY49QMJ
Engine Type	Single cylinder, air-cooled, 4-stroke
Bore x Stroke	39mm x 41.5mm
Cylinder Displacement	49.6 ml
Compression Ratio	10.5 : 1
Max. Power / RPM	2.2 kw/7500 rpm
Max. Torque / RPM	3.2 Nm/6000 rpm
Ignition	CDI

Model: Agility 50-M30	Specifications
Lubrication System	Pressure & splash
Starting Method	Electrical start / kick start
Spark Plug	CR7HSA
Clutch Type	Dry and automatic
Tires	Front: 3.00-10 Rear: 3.00-10
Brake Type	Front: Disc; Rear: Drum
Suspension	Front: Spring liquid flex Rear: Spring oil damp
Headlight	12V 35W/35W
Parking Light	12V 3W
Turn Signals	12V 5W / 21W
Taillight / Brake Light	12V 5W / 21W
Instrument Panel Light	12V 3W
High Beam Indicator	12V 3W
Turn Signal Indicator	12V 3W
Cell Phone Indicator	12V 3W
Fuse	15A
Horn	12V 3A 105dB(A)

## SPECIFICATIONS

Model: Force 50-M30	Specifications
Size (L x W x H)	1810mmx725mmx1050mm
Wheelbase	1330mm
Net Weight	200 lbs.
Max. Load	330 lbs.
Max. Speed	30 m.p.h. (48 Km/h)
Max. Slope	≥21°
Min Clearance	110mm
Max. Driving Noise	≤77 dB(A)
Fuel Tank Capacity	1.1 gal
Engine Oil Capacity	0.6 qt
Engine Oil	SAE 15W-40
Engine Model	YY49QMJ
Engine Type	Single cylinder, air-cooled, 4-stroke
Bore x Stroke	39mm x 41.5mm
Cylinder Displacement	49.6ml
Compression Ratio	10.5 : 1
Max. Power / RPM	2.2 kw/7500 rpm
Max. Torque / RPM	3.2 Nm/6000 rpm
Ignition	CDI

Model: Force 50-M30	Specifications
Lubrication System	Pressure & splash
Starting Method	Electrical start / kick start
Spark Plug	CR7HSA
Clutch Type	Dry and automatic
Tires	Front: 130/70-12 Rear: 130/70-12
Brake Type	Front: Disc; Rear: Drum
Suspension	Front: Spring liquid flex Rear: Spring oil damp
Headlight	12V 35W/35W
Parking Light	12V 3W
Turn Signals	12V 5W / 21W
Taillight / Brake Light	12V 5W / 21W
Instrument Panel Light	12V 3W
High Beam Indicator	12V 3W
Turn Signal Indicator	12V 3W
Cell Phone Indicator	12V 3W
Fuse	15A
Horn	12V 3A 105dB(A)



## SPECIFICATIONS

Model: Raptor 50-M30	Specifications
Size (L x W x H)	1890mmx670mmx1170mm
Wheelbase	1330mm
Net Weight	210 lbs.
Max. Load	330 lbs.
Max. Speed	30 m.p.h. (48Km/h)
Max. Slope	≥21°
Min Clearance	110mm
Max. Driving Noise	≤77 dB(A)
Fuel Tank Capacity	1.1 gal
Engine Oil Capacity	0.6 qt
Engine Oil	SAE 15W-40
Engine Model	YY49QMJ
Engine Type	Single cylinder, air-cooled, 4-stroke
Bore x Stroke	39mm x 41.5mm
Cylinder Displacement	49.6ml
Compression Ratio	10.5 : 1
Max. Power / RPM	2.2 kw/7500 rpm
Max. Torque / RPM	3.2 Nm/6000 rpm
Ignition	CDI

Model: Raptor 50-M30	Specifications
Lubrication System	Pressure & splash
Starting Method	Electrical start / kick start
Spark Plug	CR7HSA
Clutch Type	Dry and automatic
Tires	Front: 130/70-12 Rear: 130/70-12
Brake Type	Front: Disc; Rear: Drum
Suspension	Front: Spring liquid flex Rear: Spring oil damp
Headlight	12V 35W/35W
Parking Light	12V 3W
Turn Signals	12V 5W / 21W
Taillight / Brake Light	12V 5W / 21W
Instrument Panel Light	12V 3W
High Beam Indicator	12V 3W
Turn Signal Indicator	12V 3W
Cell Phone Indicator	12V 3W
Fuse	15A
Horn	12V 3A 105dB(A)

## SPECIFICATIONS

Model: Victoria 50-M30	Specifications
Size (L x W x H)	1890mmx670mmx1170mm
Wheelbase	1330mm
Net Weight	240 lbs.
Max. Load	330 lbs.
Max. Speed	30 m.p.h. (48Km/h)
Max. Slope	≥21°
Min Clearance	110mm
Max. Driving Noise	≤77 dB(A)
Fuel Tank Capacity	2.2 gal
Engine Oil Capacity	0.6 qt
Engine Oil	SAE 15W-40
Engine Model	YY49QMJ
Engine Type	Single cylinder, air-cooled, 4-stroke
Bore x Stroke	39mm x 41.5mm
Cylinder Displacement	49.6ml
Compression Ratio	10.5 : 1
Max. Power / RPM	2.2 kw/7500 rpm
Max. Torque / RPM	3.2 Nm/6000 rpm
Ignition	CDI

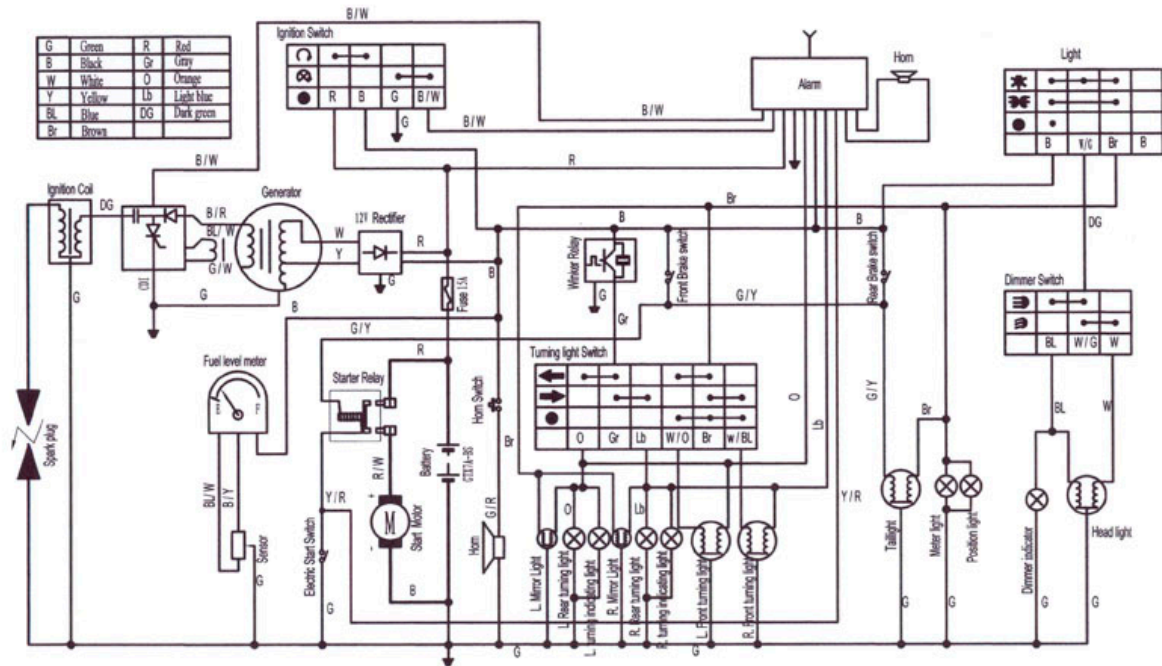
Model: Victoria 50-M30	Specifications
Lubrication System	Pressure & splash
Starting Method	Electrical start / kick start
Spark Plug	CR7HSA
Clutch Type	Dry and automatic
Tires	Front: 130/60-13 Rear: 130/60-13
Brake Type	Front: Disc; Rear: Drum
Suspension	Front: Spring liquid flex Rear: Spring oil damp
Headlight	12V 35W/35W
Parking Light	12V 3W
Turn Signals	12V 5W / 21W
Taillight / Brake Light	12V 5W / 21W
Instrument Panel Light	12V 3W
High Beam Indicator	12V 3W
Turn Signal Indicator	12V 3W
Cell Phone Indicator	12V 3W
Fuse	15A
Horn	12V 3A 105dB(A)

## SPECIFICATIONS

Model: Neo 50-M30	Specifications
Size (L x W x H)	1660mmx680mmx1070mm
Wheelbase	1195mm
Net Weight	165 lbs.
Max. Load	220 lbs.
Max. Speed	30 m.p.h. (48Km/h)
Max. Slope	≥21°
Min Clearance	110mm
Max. Driving Noise	≤77 dB(A)
Fuel Tank Capacity	1.4 gal
Engine Oil Capacity	0.6 qt
Engine Oil	SAE 15W-40
Engine Model	YY49QMJ
Engine Type	Single cyl., air-cooled, 4-stroke
Bore x Stroke	39mm x 41.5mm
Cylinder Displacement	49.6ml
Compression Ratio	10.5 : 1
Max. Power / RPM	2.2 kw/7500 rpm
Max. Torque / RPM	3.2 Nm/6000 rpm
Ignition	CDI

Model: Neo 50-M30	Specifications
Lubrication System	Pressure & splash
Starting Method	Electrical start / kick start
Spark Plug	CR7HSA
Clutch Type	Dry and automatic
Tires	Front: 3.00-10 Rear: 3.00-10
Brake Type	Front: Disc; Rear: Drum
Suspension	Front: Spring liquid flex Rear: Spring oil damp
Headlight	12V 35W/35W
Parking Light	12V 3W
Turn Signals	12V 5W / 21W
Taillight / Brake Light	12V 5W / 21W
Instrument Panel Light	12V 3W
High Beam Indicator	12V 3W
Turn Signal Indicator	12V 3W
Cell Phone Indicator	12V 3W
Fuse	15A
Horn	12V 3A 105dB(A)

# WIRING DIAGRAM





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