Raybar

RIND 150

RY-150RN

USER MANUAL

PREFACE

Thank you for Choosing Raybar RINO 150/RY-150RN motorcycle. We wish you a happy and reliable riding.

We are committed to customer satisfaction. We strive to provide great user experience by product innovation and excellent after sales support.

This user manual is guide for you to understand function of various parts, riding operation, maintenance schedule and basic maintenance of your new Raybar motorcycle. Please go through this manual to understand your motorcycle before using it.

Please contact your dealer for detailed information about the product and for after sale services.

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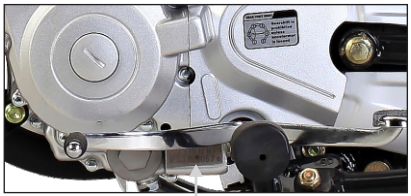
MOTORCYCLE IDENTIFICATION

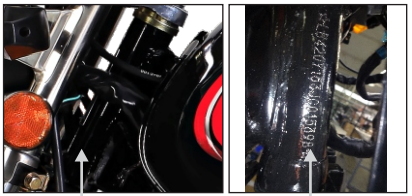


Engine Number

Engine serial number is engraved on crankcase assembly.

VIN number

Vehicle identification number (VIN) is stamped on steering head tube.



Frame number

Frame number is engraved on the steering head tube.

Note - Frame number and engine number is usually required for vehicle registration and insurance purpose.

FRONT TOP VIEW

1. Rear view Mirror
2. Left handle bar switches
3. Fuel tank
4. Right handle bar switches
5. Speedometer
6. Ignition switch

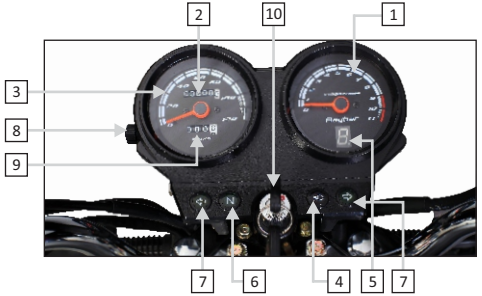
RIGHT SIDE VIEW

1. Rear carrier
2. Tail lamp
3. Seat
4. Rear fender
5. Rear wheel
6. Muffler
7. Rear tyre
8. Headlamp
9. Front shocker
10. Front fender
11. Front tyre
12. Front disc brake
13. Pedal brake
14. Front wheel

LEFT SIDE VIEW

1. Indicator
2. Side cover
3. Engine
4. Pedal gear change
5. Rear suspension
6. Chain case
7. Side stand
8. Main stand

PARTS FUNCTION



Meters and indicators

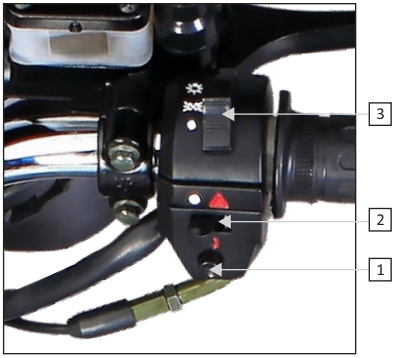
1. Tachometer- Displays RPM (revolutions per minute) of wheel.
2. Odometer – Records accumulated riding distance.
3. Speedometer – Displays riding speed of motorcycle.
4. "≡D" High beam indicator- Indicator turns ON when head lamp is in high beam.
5. Gear Indicator – Displays current gear in which vehicle is operating.
6. Neutral gear indicator – Turns ON when transmission is in neutral gear position.
7. Turn signal indicator left & right – Flashes when left or right turn signal switch is operated.
8. Trip meter reset knob – Resets trip meter to zero.
9. Trip meter – Displays travelled distance between two points.
10. Ignition switch –
    (a) OFF position – All electrical circuits are cut off. The engine cannot be started. The key can be removed in this position.
    (b) ON position – The ignition circuit is completed. Engine can now be started. The key cannot be removed in this position.
    (c) LOCK position – To lock the steering, turn the handlebar all the way to the left. Push down the key and rotate to "LOCK" position, let the key come up and now remove the key.

Left handlebar control switches

1. Headlamp dimmer switch- This switch is used to change headlamp position from low beam to high beam or vice versa.
2. Turn signal switch – Operate the switch when turning right or left by pushing the switch towards right or left.
   (a) Turn right position – The right turning lamp and right turn signal indicator on instrument panel flashes.
   (b) Turn left position– The left turning lamp & left turn signal indicator on instrument panel flashes.
3. Horn switch – Press the switch to operate the horn.
4. Choke - This switch is used to stop air supply to carburetor, when rich mixture is required to start the motorcycle during cold start.
5. USB Charger – For charging mobile with the help of a USB cable.
6. Step Switch - Turns the focus light on for as long as it is pressed.

Right handlebar control switches

1. Electric starter switch – When this switch is pressed, starter motor cranks the engine. This switch should not be pressed over 5 seconds continuously.
2. Hazard warning switch – All 4 indicators starts to flash. This button can be operated when you are a temporary obstruction for traffic or you want to warn 1the upcoming vehicle about unusual condition up ahead.
3. Headlamp switch –
   (a) "☼" position – The headlamp , front parking light and tail lamp are turned ON.
   (b) "●" position – All lamps are turned OFF.
   (c) "≫≪" position – Front parking lamp and tail lamp are turned ON.



Fuel tank & Fuel tank cap

The capacity of the fuel tank is 12L, including reserve fuel.

(a) Opening fuel tank cap - To open the fuel tank cap insert the key and rotate it 90° in clockwise direction, now fuel tank cap can be taken out.

(b) Closing fuel tank cap - To close fuel tank cap, align the latch on the tank cap with the groove on the oil filling neck, press the cover down, now take out the key.

(c) Fuel filling – Make sure that tank is not over filled. The gasoline is inflammable, so engine should be stopped before fuel filling. Fuel filling should not be done near fire and don't smoke while fuel filling.

Fuel cock

The fuel cock is 3 way fuel flow regulator. It has 3 options OFF, ON and RES.

(A) OFF – When the vehicle is not to be used, rotate the knob until it comes to OFF position. This will stop the fuel flow to the carburetor.

(B) ON - To start the fuel flow to carburetor, rotate the knob and bring it to ON position.

(C) RES – When the main fuel capacity runs out in ON position you can use reserve fuel capacity. To use reserve fuel capacity, rotate the knob and bring it to RES position. Please add fuel as soon as possible when you start using reserve fuel.

Fuel filter
A fuel filter is a filter in the fuel line that screens out dirt and rust particles from the fuel. From fuel tank, fuel goes to carburetor after passing through fuel filter.

Throttle
It controls the fuel air mixture flow from carburetor to engine. To increase the speed of the vehicle, rotate throttle in backward direction and to decrease the speed of the vehicle, rotate throttle in forward direction.

Pedal gear change
Pedal gear change is used to change gear position. To change gear position, press pedal gear change up or down by foot, as per gear change pattern. Please use clutch while changing gear.

Tyre
Proper tyre pressure will provide maximum stability, mileage, riding comfort and tyre life. Check tyre pressure frequently and adjust if necessary. Select the right replacement tyres in accordance with the tyre sizes given in table below -

Tyre Size Front	2.75-18
Tyre Size Rear	3.00-18

Starting lever or Kick

This is used to start the engine manually. To start the engine by kick, you need to place your foot on the lever and push it downwards quickly.

Pedal brake

This is used to apply braking force on rear wheels. When you want to stop the vehicle or reduce speed, you need to press the pedal brake in downward direction.

Clutch lever

Clutch lever can be operated when you want to shift gears. Operation of clutch stops power transfer from engine to transmission. To operate clutch, you need to pull clutch lever towards yourself.

Front brake lever

This is used to apply braking force on front wheels. When you want to stop the vehicle or reduce speed, you need to pull front brake lever towards yourself. Always apply front and rear brake together.

Inspection before riding

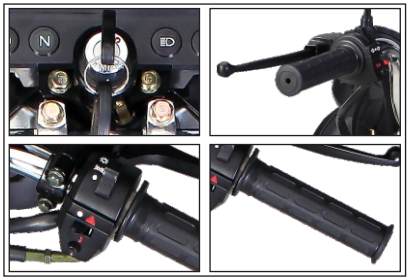
In order to ensure your safety, make a general inspection before riding according to the table given below –

No.	Item	Inspection	Remark
1	Fuel system	Check fuel capacity and fuel leakage	For the vehicles with different riding miles and performance, please adopt different maintenance. 1. Elementary maintenance: 1000km~2000km riding, please lubricate & check tyre pressure. 2. Secondary maintenance: 3000km~6000km riding, please check wear and tear of parts and tighten fasteners. 3. Advanced maintenance: 6000km~10000km riding, please disassemble, inspect and do troubleshooting. 4. Inspect and maintain your motorcycle at professional maintenance station or service centre.
2	Carburetor	Check carburettor for fuel leakage and idle speed for stability and proper acceleration.	
3	Lubrication oil	Check luboil for quality and whether level is lower than the low scale mark.	
4	Electrical system	Check electrical system for proper functioning.	
5	Battery	Check battery for any leakage or spillage and acidic corrosion.	
6	Clutch/Front brake lever	Check whether free stroke is appropriate and clutch can be separated and meshed normally.	
7	Gearshift/Rear brake pedal	Check gearshift for flexibility and stability and whether free stroke of brake pedal is appropriate.	
8	Throttle lever	Check throttle lever for flexibility and stroke of 2~6 mm.	
9	Steering mechanism	Check steering mechanism for flexibility and stability	
10	Chain	Check chain for abrasion and lubrication	
11	Tyre/Wheel	Check tyres for pressure and abrasion	
12	Headlamp/Tail lamp/ Turning lamps	Check Headlamp/Tail lamp/turning lamps for proper functioning.	
13	Brake	Check brake disc/ brake pad/brake shoe for abrasion and proper functioning.	
14	Main/Side stand	Check whether main stand and side stand are bended or deformed and whether they can return well.	
15	Fasteners	Check fasteners for looseness and possibility of falling.	

Starting engine & riding operation

Starting Engine - Follow below mentioned steps to start the vehicle:

1. Unlock steering, and turn ignition key to “ON”position. Shift gear to“N”neutral position or pull clutch lever.
2. Grip front brake lever or press rear brake pedal.
3. Press kick downwards powerfully with foot or press electric starter switch with right thumb.
4. Rotate throttle backwards to add proper volume of fuel to start motorcycle. Once motorcycle has started, return kick lever. Preheat 3~5 minutes at idle speed(1500±100)r/min.

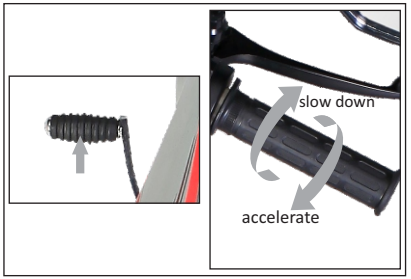


Riding Operation - After starting and preheating, return main and side stand. Now hold clutch lever and pull it towards yourself. Then press pedal gear change with left foot and shift to the first gear.

(A) Release the brake lever.

(B) Rotate throttle slowly to accelerate and release clutch lever slowly, this will give acceleration to motorcycle.

(C) Once clutch lever is released completely and motorcycle reaches to a certain speed, shift the gear from lower to upper by using clutch.



Maintenance schedule

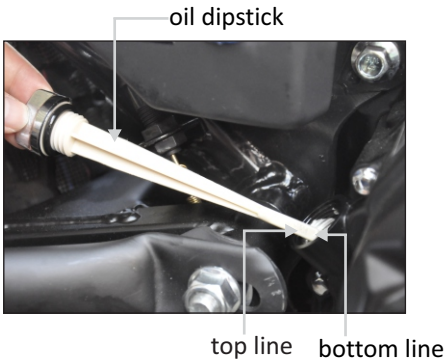
Perform maintenance according to the odometer reading or time interval, whichever comes first.

Interval / Item	Km	Initial 1000 km	Every 4000 km	Every 8000 km
	Miles	600	2400	4800
	Months	5	20	40
Battery (Specific gravity of electrolyte)		I	I	-
Cylinder head nuts & exhaust pipe bolts		T	T	-
Camshaft drive chain		I	I	-
Air cleaner		**Clean every 3,000km Replace every 12,000km**		
Valve clearance		I	I	-
Spark plug		I	C	R
Fuel hose		I	I	-
		Replace every four years		
Engine oil and oil filter		R	R	-
Carburetor		I	I	-
Clutch		I	I	-
Fuel strainer cup		C	-	C
Drive chain		**Clean and lubricate every 1000km**		
Brake		I	I	-
Tyres		I	I	-
Steering		I	I	-
Front fork and rear suspension		-	I	I
Chassis bolts and nuts		I	T	-

NOTE : Inspect and clean, adjust, replace or lubricate as necessary,I=Inspect,C=Clean, R=Replace, T=Tighten.

TOOLS - To assist you in the performance of periodic maintenance, a tool kit is supplied.

General inspection & repair



Check and replacement of engine oil

Engine oil level check

(1) Stop the engine and park the motorcycle with main stand vertically in flat surface.
(2) Wait for one minute and then check the oil level through the engine oil level sight glass.

Replacement of engine oil

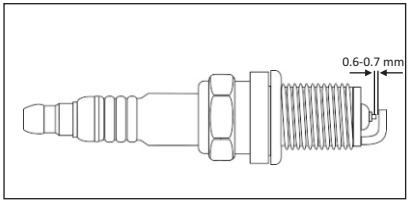
Following procedure needs to be followed to replace oil -

(1) Park the motorcycle vertically with main stand in flat surface.
(2) Remove the oil filler cap.
(3) Drain the oil by removing the drain plug located on the bottom of the engine.
(4) Once used oil is drained completely tighten the drain plug, fill engine with new engine oil. Tighten the filler cap. Do not over tight the filler cap.
(5) Start engine in idle speed for 2~3 minutes.
(6) Stop the engine and wait for a minute. Inspect the engine oil level through the engine oil level sight glass. Make sure that oil level is appropriate.

General inspection & repair

Spark plug

Check and replace



1. Disconnect the spark plug cap from the spark plug.
2. Clean any dirt from around the spark plug base. Remove the spark plug by using the plug wrench.
3. Inspect the electrodes for erosion or carbon deposit. If the erosion or deposit is heavy, replace the plug. If there is small carbon deposit, clean carbon deposit with a plug cleaner or use a wire brush.
4. Check the spark plug gap using a wire-type feeler gauge. The spark plug gap should be 0.6-0.7mm. If adjustment is required, bend the side electrode carefully. Make sure the plug washer is in good condition.
5. With the plug washer attached, tighten the sparkplug initially by hand to prevent cross threading and then tighten it by spark plug wrench.
6. Reconnect the spark plug cap.

Clean the air cleaner

At least once after every 4000Km, clean and immerse the air cleaner element into engine oil. If you drive your motorcycle in a dusty condition, more frequent cleaning will be required.

Carburetor idle speed adjustment

Start up the engine and let the engine run until it warms up fully. After engine has warmed up, close the throttle and turn the idle speed adjuster screw clockwise or anti-clockwise so that the engine may run at 1500r/min. The idle speed increases when the bolt is turned clockwise and the idle speed decreases when the bolt is turned anti-clockwise. Idle speed of the carburetor should always be optimum. If the idle speed is not appropriate, make sure to adjust the idle speed bolt once again.

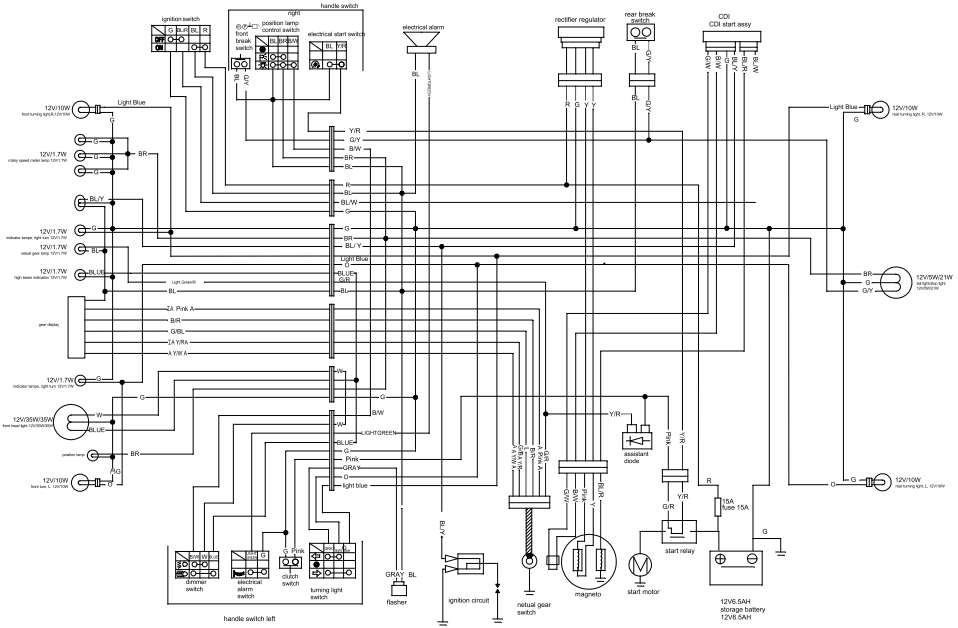
Technical specification

Engine Specification	
Cooling	Air cooled
No. of cylinders	1
Type (CG or CB)	CG
Balanced or Non balanced	Non balanced
Displacement/Capacity	150 CC
Max. Power	8.5 kw/8000r/min
Max. Torque	10 N.m/7500r/min
Bore x Stroke	62×49.5
Compression Ratio	9.2:1
Starting	Electric/ Kick start
Top speed	105 KM/H
Mileage (Litres/100 kms)	2.7L/100km
Carburetor	PZ27
Transmission & Chassis	
Clutch	Wet multi plate
Gear box	5 speed
Suspension	
Front	Telescopic
Rear	Spring coil type
Brakes	
Front Brake	Disc
Rear Brake	Drum

Technical specification

Wheels & Tyres	
Wheel Size Front	1.6×18
Wheel Size Rear	1.6×18
Tyre Size Front	2.75-18
Tyre Size Rear	3.00-18
Tyre Type (Tubeless or with Tube)	With tube
Electrical/Control System	
Battery	DC - 12V6.5AH
Head Lamp	12V/35W
Head Lamp Type (Normal/LED)	Normal
Tail/Stop Lamp	12V/10W
Tail Lamp Type (Normal/LED)	Normal
Turn Signal Lamp	12V/5W
Turn Signal Lamp Type (Normal/LED)	Normal
Ignition system	A/C CDI
Speedometer	Mechanical
Dimension	
Length (mm)	2000
Width (mm)	720
Height (mm)	1110
Wheelbase (mm)	1310
Ground Clearance (mm)	130
Fuel Tank Capacity (Litres)	12
Kerb Weight (kg)	105

Electrical circuit diagram



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