SPEECH

Tricycle Motor (CCM) is a type of three-wheeled motorcycle that uses a conventional gear, designed for carrying goods and for tourism, and offers good strength and durability in various conditions.

The Tricycle Motor has an engine displacement ranging from 150cc to 300cc, including 150, 200, 250, and 300cc models. It shares most of the technical features of other three-wheeled motorcycles, and the CCM model uses a cooling system with a fan and water tank to help cool the cylinder head and engine.

Therefore, it can maintain a stable engine temperature even when driving at both high and low speeds.

The CCM three-wheeled motorcycle is also equipped with a Combi Brake System, enhancing safety when braking and navigating obstacles. In addition, it offers excellent stability and overall driving safety.

This book is intended only as a supplement to the Tricycle Motor CCM, for the purpose of maintenance and repair.

CONTENTS

INTRODUCTION

The Maintenance of Tricycle motor CCM

Technical maintenance of motorcycles is an important factor for us as technicians or direct users.

Accurate data is essential for proper inspections and adjustments, extending the motorcycle's lifespan, preventing engine failures, and minimizing potential issues.

1.Check the fluid system

1.1 Check the coolant temperature

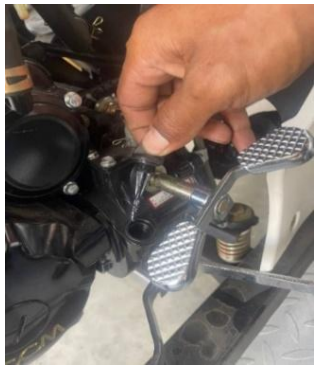
Open the water tank lid and carefully check the water level. The water used in our tricycles must be clean (such as fresh water or cooling water). This helps the tricycles and engines run smoothly, prevents overheating, extends their lifespan, reduces maintenance costs, and ensures safety.

- **Water tank capacity: 10 liters**

1.2 Brake fluid level

- Make sure the fluid level is between the Max & Min (as shown in the picture) to be accurate. And the brake fluid we use is **Dot 3** type.
- Change brake fluid at 30,000 km.

1.3 Check the gearbox oil level



- Make sure the oil level is between the maximum and minimum
- Max & Min (as shown in the picture) to be accurate. And the oil to be used is the type of gear oil 80W - 90.

  Change the gearbox oil at 25,000 km.
  - **Gearbox oil volume 0.25 ml**

1.4 Check the Hydraulic oil pump level

- Pump oil level : Make sure the oil level is between the maximum and minimum Max & Min (as shown in the picture) to be accurate. The oil to be used is type 68
- Change the Hydraulic oil pump at 25,000 km.
  - **Pump oil volume 5 liters**

1.5 Check the Axle oil level

- Make sure the oil level is between the top bolt holes. If the oil level is below the top mark, add oil.
- The oil to be used is 85W -140 Axle grade oil.
- Change the **Axle** oil at 25,000 km.

Engine Type	Axle Oil Quantity
150CC	**1L**
200 CC / 250 CC / 300 CC	**1.5 L**

1.6 Check the Universal joints

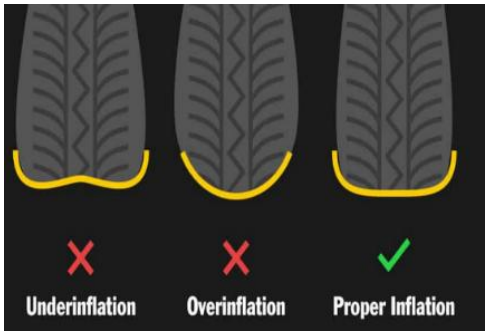
- Tighten the caliper bolts Universal joint
- Fill the calorimeter chamber with cow fat.

1.7 Check Air filter

- **General condition:** If there is a lot of dirt or dust, remove the air filter to blow out the dust and replace it in case of serious problems.
- But if there are no problems with the air, wait until the mileage reaches **2500 Km** or **3500Km** and change the air filter.

1.8 Check tire pressure

- Regularly check the tire tread and tire pressure before traveling, and make sure the tire pressure is within the standard (see image).



Engine type	Cold tire pressure	Load weight per tire
150CC	250 KPa (43 PSI)	290 kg
200CC	400 KPa (57 PSI)	485 kg
250CC	400 KPa (57 PSI)	485 kg
300CC	420 KPa (60 PSI)	500 kg

2. Electrical System Section

2.1 Check the Battery

- Check the battery terminals
- Check the power cable
- Check the battery voltage (current)

Engine Type	Battery Specification
150CC	**12V – 9Ah Battery**
200 CC / 250 CC / 300 CC	**12V – 32Ah Battery**

2.2 Check the key switch

- Insert the key, turn the key from OFF to ON and check if the indicator light turns green (N) is good.
- If the ignition switch does not light up, we must :
  - Check the battery fuse.
  - Check the power cable and battery voltage.

2.3 Check the left and right front or rear turn signal system

- **First** turn the ignition switch from OFF to ON.
- Then turn the left and right turn signal switches.
- Then check the front or rear lights with orange and green indicator lights on the dashboard for identification.
- If any light bulb is not working or not lighting up.
- Check the light bulb.
- Check the contactor.
- Check the power cable (wire) or ground.
- Check the fuse.
- Check the Flasher Relay

2.4 Check the handbrake and footbrake lights.

- **First** turn the ignition switch from OFF to ON and then apply the handbrake or footbrake.
- **Check** the rear brake light properly before setting off or before driving to make sure it is clear and correct, and the rear brake has a red light.
- If the light bulb does not light up
- Check the foot brake or hand brake button and the power cable.

2.5 Check the Backup light system.

- First we turn the key switch from OFF – ON.
- Then put the gear lever back, then check the rear lights with white indicator lights for identification.

2.6 Check the lighting system

- First we turn the key switch from OFF – ON.
- Then turn on the High and Low light switch with the blue mark, then check the front and rear lights.

2.7 Check the Horn light system

- **First** turn the key switch from **OFF** to **ON**
- Then press the Push button to turn on the horn and see if we hear a sound.
- If you don't hear sound, we check as follows
  - ✓ Battery voltage or current
  - ✓ Flash button
  - ✓ Electrical wires and G, if all are OK, the Horn is broken and needs to be replaced.

3. Engine

- When checking, the engine must be turned off.
- Check the engine oil while cooling.
- Clean the spark plugs at 5000Km.
- Check the engine oil level properly. If it is low, we need to add it to the full level.
- Also find out the cause of the engine oil loss and what the cause is.
  - **The level of engine oil to be used and changed is 15 W40 (for new motorcycles, just out of the factory) There are instructions from the factory itself.**

- For the distance and kilometers to change the engine oil, it is from **500km-600Km**, we must change it.
- **Note:** In case you use engine oil number **20W50** only if our motorcycle has been used for a distance of **30,000Km** or more can we change it.

Engine Capacity	Fuel Tank Capacity	Fuel Consumption per 100 km
ទូទៅ / General	18 L	
200CC	18 L	6 – 7L
250CC (Racing bike)	18 L	7 – 8L
250CC (Standard double bike)	18 L	8 – 9L
250CC (Modified double bike)	18 L	8 – 10L
300CC (Double bike)	18 L	9 – 10L

4. Weight load

Engine Capacity	Type	Weight in Cage (Kg)
150CC		**200–500**
200CC	One-wheel	**480–700**
250CC	Two-wheeled	**600–1100**
250CC	Normal double bike	**500–600**
250CC	Double-sided bike	**600–1000**
300CC	Normal double bike	**800–1300**

Note: It is recommended to check and maintain it frequently if driving on dusty roads.

- Should be inspected and maintained frequently if driving in the rain or using it heavily.
- Should be inspected and maintained frequently if driving on uneven roads, potholes, or in deserts.