



## STUDENT'S WORKSHEET FOR X MOTORBIKE ENGINEERING

SMK MA'ARIF 5 KOTA GAJAH

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**SUBJECT** : ENGLISH  
**MATERIAL** : PROCEDURE TEXT  
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### Analyzing Motorcycle Maintenance Procedure Texts

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#### Introduction to the Case Study

Dear students of Grade X Motorcycle Engineering, as future technicians, understanding standard maintenance procedures is vital. This worksheet presents four essential maintenance tips. You must analyze the data, compare steps, and interpret the information to answer each question with **one word or one number only**.

Interactive Video Link:

To support your understanding of basic motorcycle service context, please watch:

<https://youtu.be/C3pipJRwyrk>

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## 1. Tip A: Routine Engine Oil Check (Every 2,500 km)

Procedure Text:

TIPS: How to Check Engine Oil Level by Yourself

**Objective:** To know the condition and volume of the engine oil to prevent fatal damage.

**Materials & Tools:** Clean cloth, ring wrench (if needed), and center stand.

**Steps:**

1. Ensure the motorcycle has been warmed up for **3-5** minutes, then turn it off. Let it rest for **2-3** minutes so the oil drains down to the crankcase.
2. **Position** the motorcycle straight upright using the **center stand** on a flat surface.
3. **Remove** the oil dipstick, clean the tip with a cloth. **Do not** reinstall it yet.
4. Insert the dipstick back in (no need to turn or tighten it), then pull it out.
5. Observe the oil level. Ideally, it should be between the upper limit (**UPPER**) and the lower limit (**LOWER**) lines.
6. If the level is below the **LOWER** limit, immediately add oil with the appropriate specification.



| No. | Short Answer Question (1 Word/Number)  | Answer Box |
|-----|--|------------|
| 1   | To allow the oil to drain completely, the motor must be left off for a <b>minimum</b> of how many <b>minutes</b> ? |            |
| 2   | What is the term for the desired highest oil volume mark on the dipstick?  |            |
| 3   | What position should the motorcycle be in when using the center stand for an accurate check?                       |            |
| 4   | If the oil level is correct, it should be found between <b>UPPER</b> and what other term?                          |            |
| 5   | What action is required immediately if the oil level is observed to be below the LOWER limit?                      |            |

## 2. Tip B: Motorcycle Chain Maintenance (Lubrication & Adjustment)

### Procedure Text:

### TIPS: Motorcycle Chain Maintenance for Longevity

A chain that is too tight causes gear components to wear out quickly, while a chain that is too loose risks coming off the gear. The ideal chain slack distance (free play) is **20-30 mm**.



### Lubrication Steps:

1. Position the motorcycle on the center stand.
2. Clean the chain from dirt and dust using a brush and a special chain cleaner (not gasoline).
3. **Dry** the chain completely before lubricating.
4. Spray chain lubricant (**chain lube**) evenly onto the **inner** side of the chain.
5. Rotate the wheel several times to ensure the lubricant is distributed.
6. Allow the lubricant to soak in for **10 minutes** before the motorcycle is used.

| No. | Short Answer Question (1 Word/Number)  | Answer Box |
|-----|--|------------|
| 6   | What is the maximum ideal chain slack distance in <b>mm</b> ?  |            |
| 7   | What is the specific side of the chain that should receive the lubricant?                            |            |
| 8   | What is the consequence for the gear components if the chain is adjusted too <b>tight</b> ?          |            |
| 9   | What chemical liquid should <b>not</b> be used to clean dirt from the chain?                         |            |
| 10  | What is the minimum waiting time (in <b>minutes</b> ) after lubrication before using the motorcycle? |            |

### 3. Tip C: Tire Pressure Check (Safety Standard)

#### Procedure Text:

#### TIPS: Correct Tire Air Pressure According to Standard

Proper tire pressure is crucial for safety, comfort, and fuel efficiency. Pressure is usually listed on a sticker near the swing arm or in the owner's manual. Under-inflation can cause tires to heat up quickly and waste fuel.

#### Example Pressure Standards (PSI):

- Front Tire: **28 PSI** (Single Rider) / **30 PSI** (Riding Double)
- Rear Tire: **30 PSI** (Single Rider) / **32 PSI** (Riding Double)

#### Checking Steps:

1. Use a calibrated tire pressure gauge.
2. Take measurements when the tires are **cold** (have not been used for a long journey).
3. Compare the measurement results with the standard. If low, inflate immediately.

| No. | Short Answer Question (1 Word/Number)   | Answer Box |
|-----|---|------------|
| 11  | What is the recommended PSI for the rear tire when carrying only one rider?                       |            |
| 12  | What is the three-letter unit used to measure tire pressure in the text?                          |            |
| 13  | What part of the motorcycle contains the pressure information sticker besides the owner's manual? |            |
| 14  | What is the opposite of <b>cold</b> tires, which should be avoided when checking pressure?        |            |
| 15  | What will happen to fuel efficiency if the tire pressure is too low (under-inflation)?            |            |



#### 4. Tip D: Effective Brake Usage (Braking Technique)

##### Procedure Text:

##### TIPS: Correct and Effective Braking Technique

In safe riding technique, proper braking is crucial. The braking system involves the front brake and the rear brake.

##### Ideal Braking Ratio:

- Normal braking: **70% Front Brake + 30% Rear Brake.**
- Emergency braking: Balanced use is necessary to prevent skidding.

##### Normal Braking Steps:

1. Pull the front brake lever gradually and smoothly.
2. Press the rear brake pedal with balanced force.
3. **Reduce** the front brake ratio when the road condition is slippery or wet.
4. **Avoid** using the front brake 100% at high speeds, as it can cause the wheel to **lock up** and lead to a fall.

| No. | Short Answer Question (1 Word/Number)  | Answer Box |
|-----|--|------------|
| 16  | What is the percentage (number) of rear brake force used in normal braking?            |            |
| 17  | What will happen to the front wheel if the front brake is applied 100% at high speeds? |            |
| 18  | What type of road condition requires the rider to <b>reduce</b> the front brake ratio? |            |
| 19  | What is the total combined percentage for the ideal normal braking ratio?              |            |
| 20  | What is the main goal of maintaining balance in emergency braking?                     |            |

