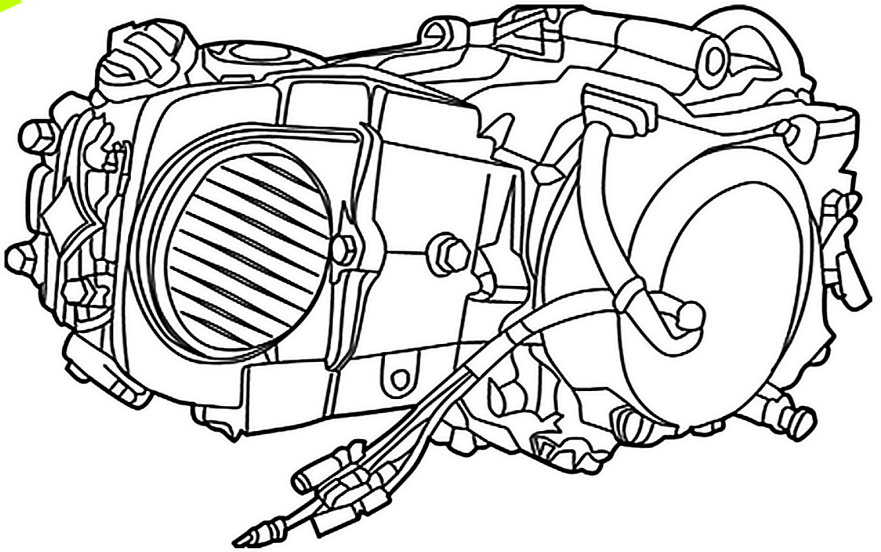
# OWNER'S MANUAL

## PACKS THE BIGGEST PUNCH

Read and understand this entire manual before riding. Thumpstar Motorbikes strongly recommend having this machine assembled by a skilled mechanic. Assembly should include, but is not limited to checking over the entire bike including the engine.

GENUINE THUMPSTAR

# ENGINE MANUAL



VIN & ENGINE NUMBER

**NOTE:**
Manual illustrations are for demonstration purposes only. Illustrations may not reflect exact appearance of actual product. Specifications subjected to change without notice.

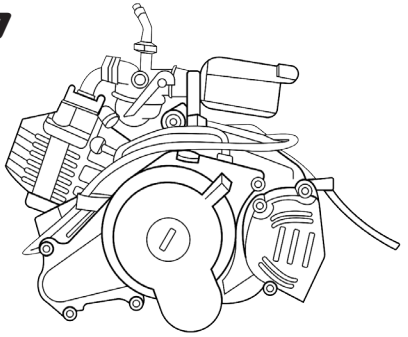
/thumpstarmoto
/genuinethumpstar

**MANUAL # 3598**

## Owner's Manual

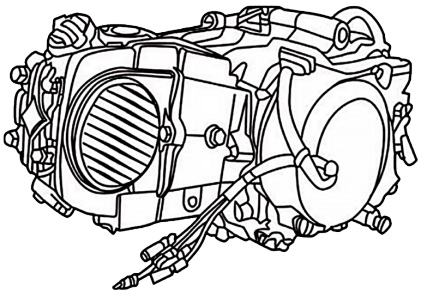
# ENGINE MANUAL

### KXD



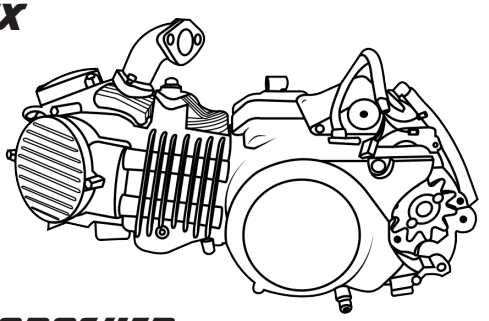
- 50cc
- 88cc

### FENGHONG



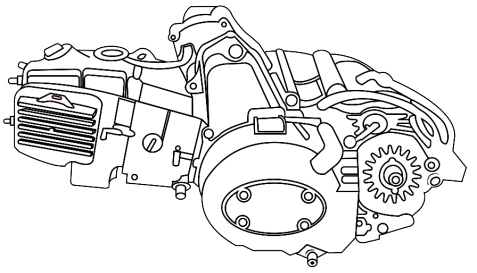
- 70cc
- 110cc

### YX



- 125cc
- 140cc
- 150cc
- 160cc
- 180cc

### ZONGSHEN



- 155cc
- 190cc

# Contents

# Contents

# Quick Reference



## *KXD 50CC | 70cc*

| | |
|---|---|
| **Oil** | 4 Stroke10/40 950mls |
| **Spark Plug** | Torch A7TC \| NGK C7HSA |
| **Valve Clearance** | .003” intake / .005” exhaust |

## *FENHONG 70CC | 110cc*

| | |
|---|---|
| **Oil** | 4 Stroke10/40 950mls |
| **Spark Plug** | Torch A7TC \| NGK C7HSA |
| **Valve Clearance** | .003” intake / .005” exhaust |

## *YX 125CC | 140CC | 150CC | 160CC | 180CC*

| | |
|---|---|
| **Oil** | 4 Stroke10/40 950mls |
| **Spark Plug** | Torch A7TC \| NGK C7HSA |
| **Valve Clearance** | .003” intake / .005” exhaust |

## *ZONGSHEN 155CC | 190CC*

| | |
|---|---|
| **Oil** | 4 Stroke10/40 950mls |
| **Spark Plug** | Torch A7TC \| NGK C7HSA |
| **Valve Clearance** | .003” intake / .005” exhaust |

# Introduction

**Congratulations** in your decision to purchase a Genuine Thumpstar Recommended Engine. The following manual has been prepared to familiarise you with your engine, and the procedures involved with operating and maintaining the engine.

# Engine Installation



***Always have a Qualified Mechanic to install your engine.***

## Tools Required:

- 8, 10, 12, 13, 14, 17, 19mm socket and spanner
- Rubber Mullet
- Paint Pen
- Thread Lock Glue
- Zip Tie

Installing an engine into your motorcycle can be different for every motorcycle. It depends on what brands you've purchase and what parts you require cause some people will need new carburetor, electrical, sprockets and cables. Some people are also doing straight replacement and won't need anything else but the engine.

The most important thing before you can install your new engine is to make sure that your engine end frame has the universal crf50 engine mounts. Sometimes both frame and engine has a universal crf50 engine mounts but the frame can be slightly different to the engine mold and may require some slight modifications to get the engine fit the frame perfectly.

Because every engine is different, we cannot give an exact guide on how to install but we can just give you some recommendations. Before you install your new engine, check you have the correct wiring, carburetion, cables and sprocket otherwise your installation will not go smoothly but you can install the engine and order this parts later on.

Remember to threadlock glue both engine mounts, footpeg mounts and torque to the settings. ***(page 121)***

When installing the carburetor make sure the right gasket is used at the carburetor and the air filter is oiled.

# Engine Installation

## Engine break-in

Run bike at no more than three quarter throttle & do not allow engine to rev to a high speed. Engine break-in should be no less than one hour. After one hours carry out the following checks & procedures:

☐ Drain oil & replace with 950mls quality 10w 30w or 10w 40 4-stroke engine oil ***(page 48)***

☐ Check all nuts & bolts & tighten where necessary ***(page 121)***

☐ Check wheel spokes (especially rear wheel drive side) & tighten where necessary

☐ Re-Adjust throttle cable & clutch cable if required ***(page 57*** & ***60)***

☐ Re-tension chain and lubricate

☐ Check wheel bearings for any sign of wear of free-play

☐ Check brake calliper operation & brake pad wear ***(page 70)***

☐ Check tire pressures ***(page 78)***

Remember to do pre-ride inspection each time you ride ***(page 23)***

## FUEL HANDLING

Precautions should be taken when handling any type of petrochemicals. Gasoline can catch fire, and is toxic to life and the environment. Thumpstar motorbikes recommend the following safety tips to avoid accidents, injury/death:

Always turn off the engine when re-fuelling. Do not refuel right after the engine has been running and is still very hot. Do not spill gasoline on the engine or exhaust pipe/muffler when refuelling. When transporting the machine in another motorcycle, be sure it is kept upright and that the fuel cock is in the "OFF" position. Otherwise, fuel may leak out of the Carburetor or fuel tank.

# Starting & Stopping the Engine



Always follow the proper starting procedure described below.

## PREPARATIONS

Before Starting, turn the fuel valve ON and make sure bike is in NEUTRAL. **Specially for TSX-C 125 Because it has to be started in Neutral.** TSX-C 140 can be started in gear but recommended to start in NEUTRAL

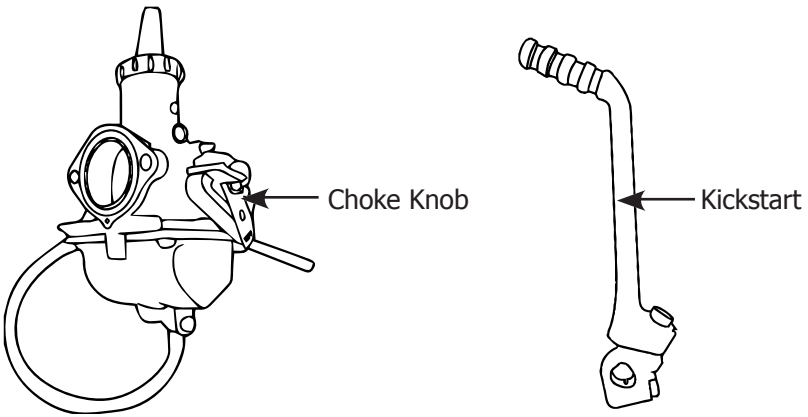
## STARTING PROCEDURE

To restart a warm engine, follow the procedure for High Air Temperature on ***page 27***.

**Normal Air Temperature**
**10° 35°C (50° 95°F)**

1. Push the choke knob up all the way to fully ON.

2. (Using the Kickstarter) Lightly depress the kickstarter until resistance is felt.Then let kickstarter return to the top of its stroke. With the throttle slightly open, operate the kickstarter. Kick from the top of the stroke through to the bottom with a rapid, continuous motion.



# Starting & Stopping the Engine

**NOTICE:**

Allowing the kickstarter to snap back freely against the pedal stop can damage the engine case.

3. Warm up the engine by opening and closing with the throttle slightly open, press the start the throttle slightly.

4. About a quarter-minute after the engine starts, push the choke knob in all the way down to fully OFF.

5. If idling is unstable, open the throttle slightly.

**High Air Temperature or to restart warm engine**
**35°C (95°F) or above**

1. Do not use the choke.

2. Start the engine (See step 2 under Normal Air Temperature)

**Low Air Temperature**
**10°C (50°F) or below**

1. Follow steps 1- 2 under Normal Air Temperature.

2. Warm up the engine by opening and closing the throttle slightly.

3. Continue warming up the engine until it runs smoothly and responds to the throttle when the choke knob is at fully OFF.

***Note: Will take at least 5 to 10 minutes for your engine to be warmed up and start smoothly***

# Starting & Stopping the Engine

## NOTICE:

Extended use of the choke may impair piston and cylinder wall lubrication and damage the engine.

## FLOODED ENGINE

If the engine fails to start after repeated attempts, it may be flooded with excess fuel. To clear a flooded engine:

**Using The Kickstarter**

1. Push the choke knob all the way down to OFF.
2. Open the throttle fully.
3. Crank the engine several times with the kickstarter.
4. Follow the High Temperature starting procedure

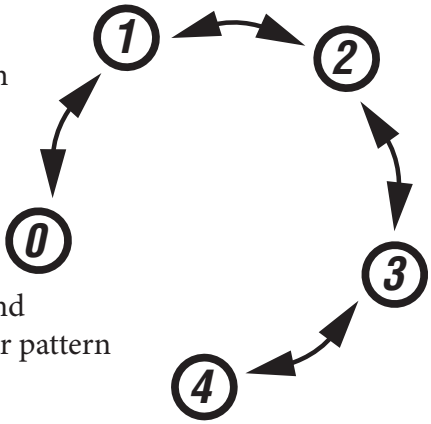
## HOW TO STOP THE ENGINE

To stop the engine, shift into neutral, then press the kill switch button.

# Shifting Gears



Thumpstar recommended engines
from 50cc to 180cc use this gear pattern




Some Thumpstars bike, ATV models and
Zongshen 190cc is using a different gear pattern
including an extra 5th gear.

Your motorcycle has four forward gears.

To start riding, after engine has been warmed up and the
side stand raised:

1. Close the throttle and pull the clutch lever in.

2. Raise the shift lever from neutral up to first gear.

3. Release the clutch lever. Gradually open the throttle.

4. When you attain a moderate speed, close the throttle, pull the clutch lever in and raise the shift lever. After shifting, realese clutch and apply the throttle.

5. To continue shifting up to each higher gear, repeat step 4.

6. To shift down to a lower gear, close the throttle, pull the clutch lever in and depress the shift lever. After shifting, apply the throttle

Remember to close the throttle before shifting.

**NOTICE:**
Improper shifting may damage the engine, transmission, and drive train.

# Shifting Gears



Upshift to a higher gear or reduce throttle before engine rpm (speed) gets too high.

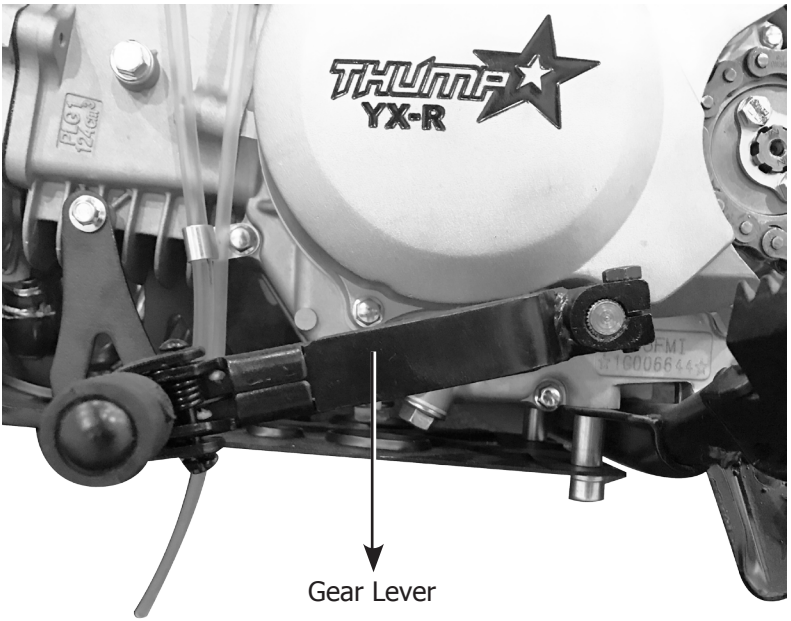
Downshift to a lower gear before you feel the engine laboring (lugging) at low rpm.

**NOTICE:**

Downshifting can help slow your motorcycle, especially on downhills. However, downshifting when engine rpm is too high can cause engine damage.

**NOTICE:**

To prevent transmission damage, do not coast or tow the motorcycle for long distances with the engine off .



# Servicing Your Thumpstar

Keeping your motorcycle well maintained is absolutely essential to your safety. It's also a good way to protect your investment, get maximum performance, avoid breakdowns, and have more fun.

To help keep your motorcycle in good shape, this section includes a Maintenance Schedule for required servicing and step-by-step instructions for specific maintenance tasks. You'll also find important safety precautions, information on oils, and tips for keeping your Thumpstar looking good.


***Maintenance Tip: The ring spanner or socket will extend the life of the bolts***

# Maintenance Schedule



To maintain the safety and reliability of your motorcycle, regular inspection and service is required as shown in the Maintenance Schedule that follows.

The Maintenance Schedule lists items that can be performed with basic mechanical skills and hand tools. Procedures for these items are provided in this manual.

The Maintenance Schedule also includes items that involve more extensive procedures and may require special training, tools, and equipment. Therefore, we recommend that you have your **Certified Motorcycle Mechanic** perform these tasks unless you have advanced mechanical skills and the required tools. Procedures for items in this schedule are provided in a service manual available for purchase from your dealer.

To avoid overlooking required service, we urge you to develop a convenient way to record the number of days and/or miles you ride. If you do not feel capable of performing a given task or need assistance, remember that your **Certified Motorcycle Mechanic** knows your motorcycle best and is fully equipped to maintain and repair it. If you decide to do your own maintenance, use only Thumpstar Genuine Parts or their equivalents for repair or replacement to ensure the best quality and reliability.

## MAINTENANCE PROCEDURES

X: Inspect and clean, adjust, lubricate, or replace, if necessary
C: Clean
A: Adjust
L: Lubricate
R: Replace

# Maintenance



Thumpstar Motorbikes promote safety as paramount. As such, it is advised that before each and every use of your bike that you actively walk around your motorcycle and check that everything appears in order. Maintenance should be undertaken regularly and servicing should be carried out by the appropriate persons. Thumpstar recommend any work being carried out on any of our range of dirt bikes should be done by an approved mechanic.

The following list has been provided for you by Thumpstar Motorbikes as an advisory process before each ride.

## FUEL LINE AND TANK

It is important to check for any fuel leaks around the tanks and along fuel lines. Bike engines become hot during use and therefore pose a fire risk. ***(page 44)***

## OIL LEVELS

Oil Levels Should be checked prior to each usage, the "dipstick" can be found on the right cover of the crack case, much like a car this is used to check the oil levels, if the engine is low on oil top up to a suitable level. The dipstick should always be replaced firmly and securely. The oil supplied with the motorcycle is transport oil that should be changed after the first 4 hours of usage. ***(page 46)***

## REPLACING THE OIL

-Remove the "sump plug"
-Drain the oil from the engine
-Replace the sump plug
-Refill the engine with a high quality oil suitable for the engine

PLEASE NOTE: Never maintain the engine when it is hot as this can cause injury, leaks of petrochemicals can cause fires, explosions and even death.

# Maintenance



Whether your Bike has a 2 – Stroke or 4 – Stroke engine, your bike engine relies on a good supply of high quality engine oil. Failure to the oil supply can permanently damage your engine, and oil leaks can cause the loss of control to your Bike.

## SPARK PLUG

. Remove the coil/lead from the spark plug
. Remove the spark plug with the correct tool
-Ensure the Gap at the contactors is 0.6-0.7mm
-Clean around the contactors (where the spark is emitted from) or replace the unit ***(page 65)***

## AIR FILTER

Check the air filter after each usage of the motorcycle. Where applicable remove the air filter for cleaning

Wash the filter or soak it with an air filter cleaner or machine oil, if the filter is in any way damaged, please source a replacement filter appropriate for fitting to the Carburetor.

CAUTION: Make sure the air filter is correctly fitted to the bike; failure to fit the filter will result in contaminants entering the engine and cause fatal damage to the engine components ***(page 55)***

## THROTTLE

The throttle of your motorcycle directly affects the speed of your bike, it should be in perfect working order before each time you ride your bike. Check and ensure that the cable and all mechanical parts included in the throttle system are moving freely. ***(page 57)***

# Maintenance

The Carburetor is also considered part of the throttle system and may also require adjustment. It is not advised to make adjustments whilst the engine is running. Repeat adjustments whilst the engine id off and test each adjustment afterwards.

To adjust the Carburetor:

-Support the motorcycle by means of the side stand
-Adjust the idling speed using the adjustment screw (recommended r/min are aprox. 1500 r/min)

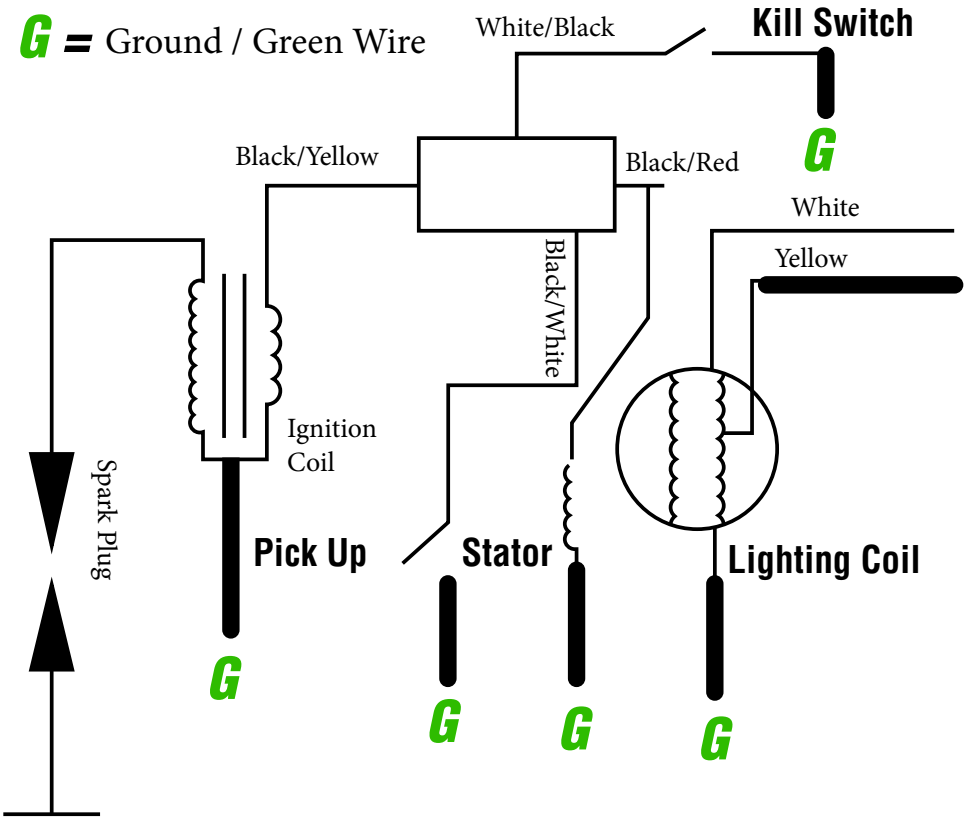
PLEASE NOTE: Do not make adjustments to a cold engine as this is the most changeable state of the engines running. Adjustments should not be made by unqualified persons, if in doubt please consult a qualified mechanic. ***(page 50)***

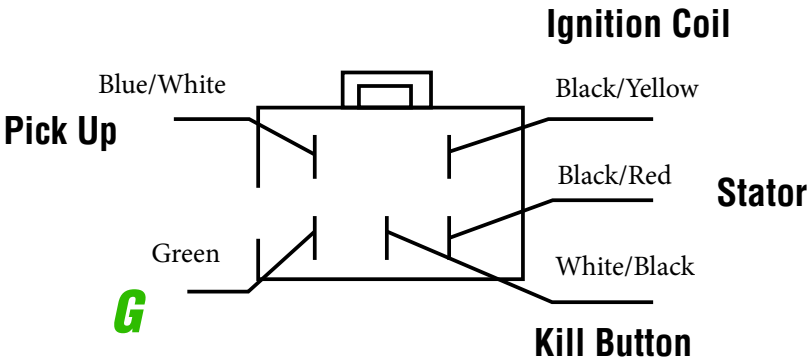
**PLEASE NOTE**:

Some cleaning chemicals can remove oils and lubricants that are vital to the running condition of the Bike. It is highly recommended that all lubricated areas are treated with the correct lubricants. Do not use corrosive detergents for the cleaning of the motorcycle. Brakes can be rendered ineffective if wet or contaminated with detergents, please allow for drying time prior to reusing the motorcycle after cleaning.

# Wiring Diagram





## FUEL RECOMMENDATION

| | |
|---|---|
| Type | Unleaded |
| Pump Octane Number | 86 (or higher) |

Your engine is designed to use any unleaded gasoline that has a pump octane number of 86 or higher. Gasoline pumps at service stations normally display the pump octane number.

Use of lower octane gasoline can cause persistent "pinging" or "spark knock" (a louder rapping noise) which, if severe, can lead to engine damage. (Light pinging experienced while operating under a heavy load, such as climbing a hill, is no cause for concern.)

If pinging or spark knock occurs at a steady engine speed under normal load, change brands of gasoline. If pinging or spark knock persists, consult your **Certified Motorcycle Mechanic**.

Use only unleaded fuel in your Thumpstar. If you ride your Thumpstar in a country where leaded fuel might be available, take precautions to use only unleaded fuel.

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt, dust, or water in the fuel tank.

**Getting dirt or dust on your fuel can block you Carburetor which can cause it to leak and cause other problems as well.**

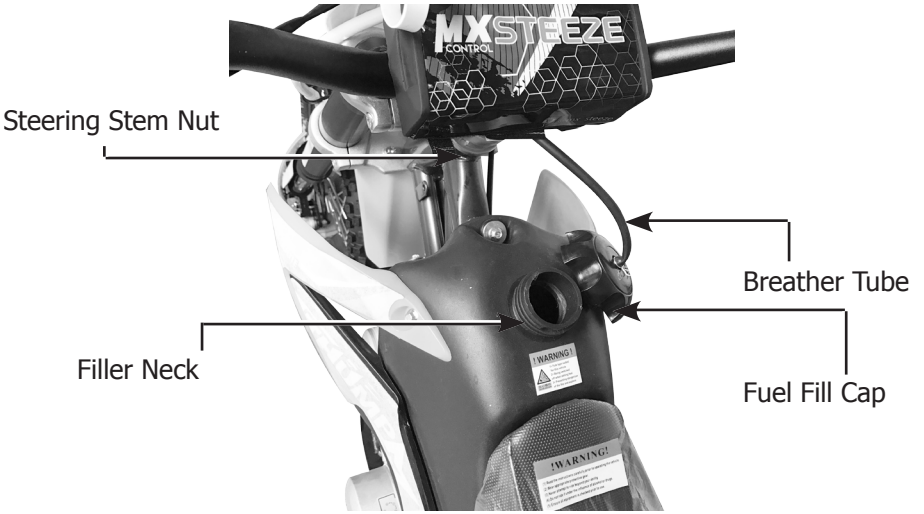
**⚠ WARNING**

**Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling fuel. Stop the engine and keep heat, sparks and flame away. Handle fuel only outdoors. Wipe up spills immediately.**

# Fuel

## REFUELING PROCEDURE

Fuel Tank Capacity, including reserve: 1.06 US gal (4.0 )
Reserve Capacity:  0.26 US gal (1.0 )




1. To open the fuel fill cap, pull the breather tube out of the steering stem nut. Turn the fuel fill cap counterclockwise and remove it.

2. Add fuel until the level reaches the bottom of the filler neck. Avoid overfilling the tank. There should be no fuel in the filler neck.

3. After refueling, turn the fuel fill cap clockwise until it is secure.

4. Insert the breather tube in the steering stem nut.

If you replace the fuel fill cap, use only a Thumpstar Genuine replacement part.

# Engine Oil



Using the proper oil, and regularly checking, adding, and changing oil will help extend your engine's life. Even the best oil wears out. Changing oil helps get rid of dirt and deposits held in the engine. Operating the engine with old or dirty oil can damage your engine. Running the engine with insufficient oil can cause serious damage to the engine and transmission.

## OIL RECOMMENDATION

| | |
|---|---|
| API classification | SG or higher except oils labeled as energy conserving on the circular API service label |
| viscosity (weight) | SAE 10W-30* / 10W-40* |
| JASO T 903 standard | MA |
| suggested oil** | 4-stroke oil, or an equivalent motorcycle oil |

*For normal air temperatures. See next page for additional temperature/ viscosity Information.

**Suggested oils are equal in performance to SJ oils that are not labeled as energy conserving on the circular API service label.

Your motorcycle does not need oil additives. Use the recommended oil.

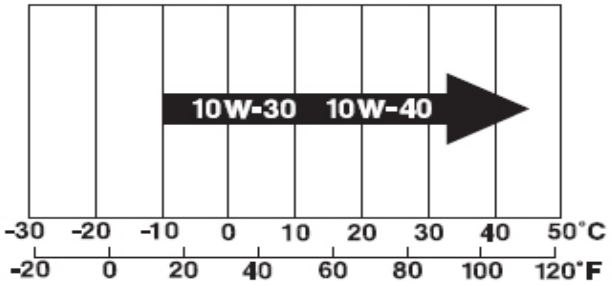
- Do not use oils with graphite or molybdenum additives. They may adversely affect clutch operation.

- Do not use API SH or higher oils displaying a circular API "energy conserving" service label on the container. They may affect lubrication and clutch performance.

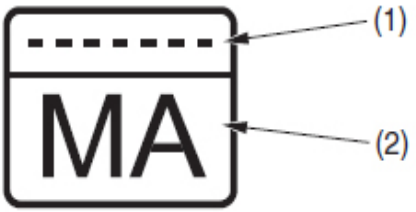
- Do not use non-detergent, vegetable, or castor based racing oils.

# Engine Oil

Other viscosities shown in the following chart may be used when the average temperature in your riding area is within the indicated range.



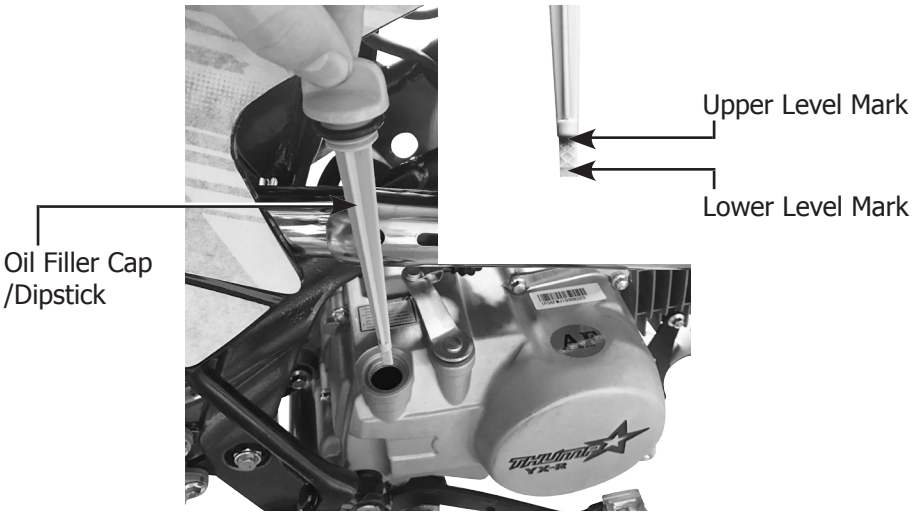

JASO T 903 standard
The JASO T 903 standard is an index for engine oils for 4-stroke motorcycle engines. There are two classes: MA and MB. Oil conforming to the standard is labeled on the oil container. For example, the following label shows the MA classification.




(1) oil code
(2) oil classification

# Engine Oil

## CHECKING & ADDING OIL




1. Park your motorcycle on a firm, level surface.

2. Clean around the oil fill cap/dipstick and nearby surfaces.

3. Start the engine and let it idle for 3-5 minutes. Stop the engine. Wait 2-3 minutes.

4. Unscrew and remove the oil fill cap/dipstick. Wipe it clean.

5. Hold the motorcycle upright.

6. Insert the oil fill cap/dipstick until it seats, but do not screw it in.

7. Remove the oil fill cap/dipstick and check the oil level.
- If the oil is at or near the upper level mark, you do not have to add oil.
- If the oil is below or near the lower level mark, add the recommended oil until it reaches the upper level mark. (Do notoverfill.)

8. Insert the oil fill cap/dipstick and screw it in tightly.

9. Check for oil leaks.

# Engine Oil

## CHANGING ENGINE OIL

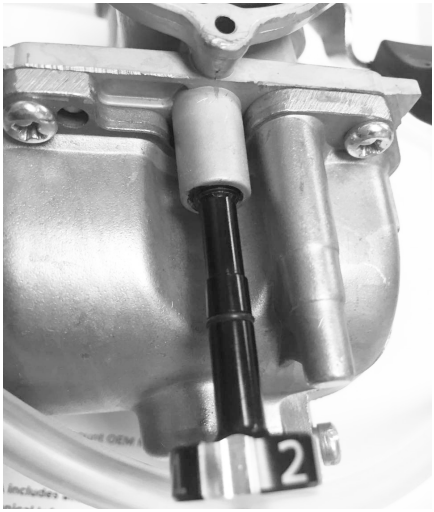

1. If the engine is cold, start it and let it idle for 3-5 minutes. Turn the engine off. Wait 2-3 minutes for the oil to settle.
2. Park your motorcycle on a firm, level surface.
3. Remove the oil fill cap/dipstick.
4. Place a drain pan under the crankcase.
5. Unscrew and remove the oil drain bolt and washer.
6. After most of the oil is drained, gently tilt the motorcycle from side to side to drain the remaining oil.
7. Pour the drained oil into a suitable container and dispose of it in an approved manner.
8. Remove the old sealing washer and install a new sealing washer on the drain bolt.
9. Install the oil drain bolt and tighten to the specified torque: 18 lbf·ft (24 N·m , 2.4 kgf·m)
10. Pour the recommended oil into the crankcase, approximately: 1 Liter
11. Install the oil fill cap/dipstick securely.
12. Start the engine. Let it idle 3-5 minutes, then turn it off.
13. With the motorcycle held upright on level ground, check the oil level. If needed, add oil until it reaches the upper level mark. (Do not overfill.)
14. Check for oil leaks.

## HIGH ALTITUDE CARBURETOR ADJUSTMENT

At high altitude, the standard carburetor airfuel mixture will be too rich. Performance will decrease, and fuel consumption will increase. A very rich mixture will also foul the spark plug and cause hard starting. Operation at an altitude that differs from that at which this engine was certified, for extended periods of time, may increase emissions.

High altitude performance can be improved by specific modifications to the carburetor. If you always operate your engine at altitudes above 6,500 feet (2,000 meters), have your servicing dealer perform this carburetor modification. This engine, when operated at high altitude with the carburetor modifications for high altitude use, will meet each emission standard throughout its useful life.

Even with carburetor modification, engine horsepower will decrease about 3.5% for each 1,000-foot (300-meter) increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.



Adjustable Air Fuel/Pilot Screw

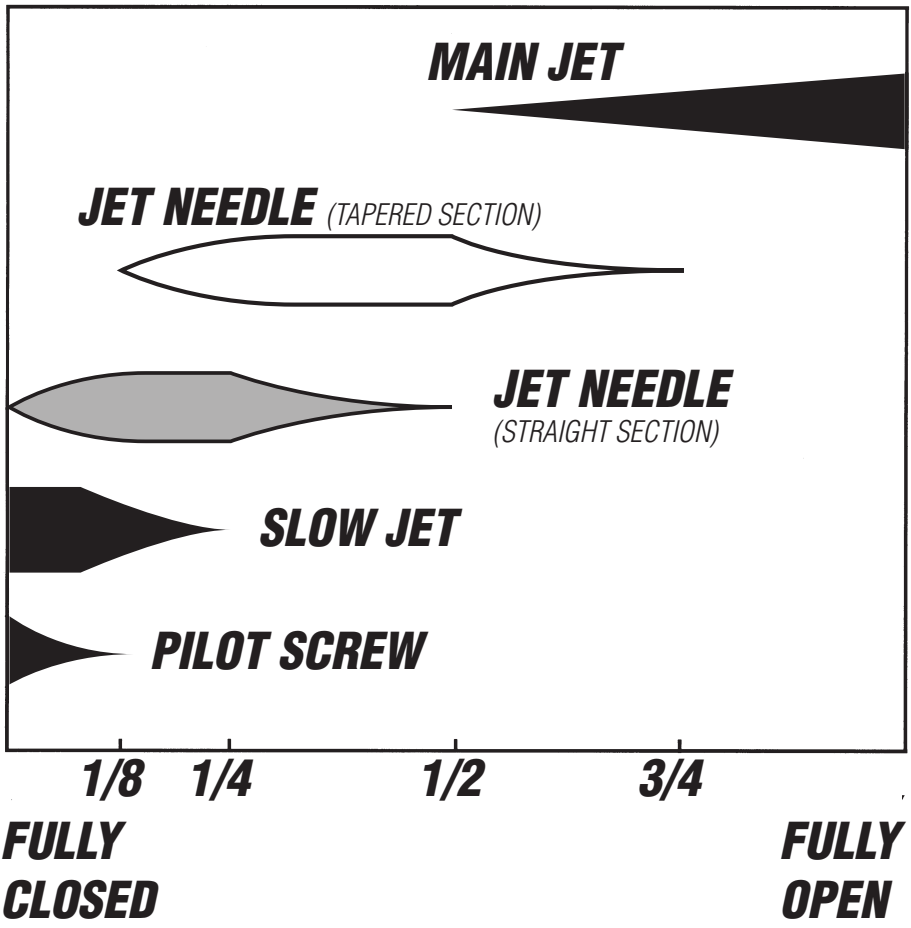
Use to adjust air fuel mixture for your bike

*Sold Separately

## CARBURETOR CIRCUIT FUNCTIONS

The carburetor has several circuits, each providing the fuel/air mixture over a given portion of throttle valve opening.

These circuits overlap as show below.




## MAIN JET

The main jet affects fuel/air ratio from half (1/2) to full throttle (4/4). The size should be reduced at higher altitudes.

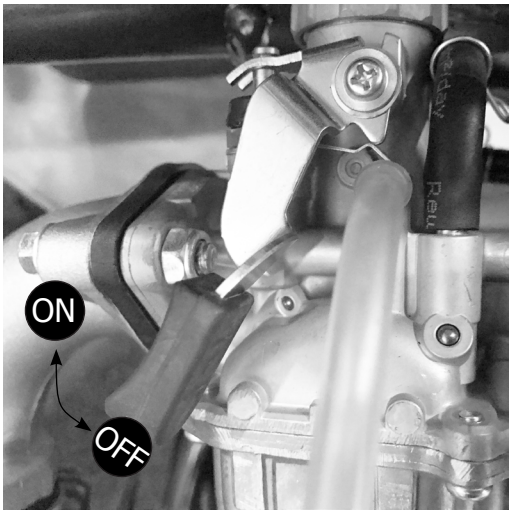
# Carburetor Adjustments & Tuning Tips

## CHOKE KNOB

The choke knob is used for starting the engine. The choke increases the percentage of fuel in the fuel/air mixture
delivered to the engine

ON
Used to start a cold engine with air temperature
below 35°C (95°F).

OFF
Used for normal operation, for restarting a
warm engine, or starting a cold engine with air
temperature above 35°C (95°F).




## JET NEEDLE

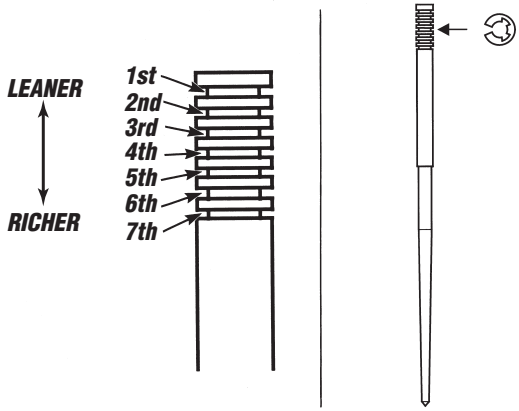
The jet needle controls fuel/air mixture over fully closed to 3/4 throttle. The straight section affects throttle response at smaller throttle openings. By changing the position of the clip in its groove, you can improve acceleration at medium low and medium speed.

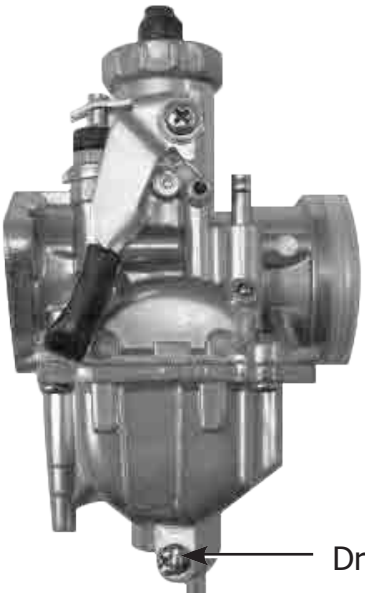
### SLOW JET AND AIR FUEL / PILOT SCREW

The slow jet and pilot screw affects fuel/air ratio over fully closed to 1/4 throttle. Adjust the pilot screw tot obtain the best off-idle performance.

- If the engine blubbers (rich) exiting a corner, turn the pilot screw clockwise to lean the mixture.

- If the engine surges (lean) exiting a corner, turn the pilot screw counterclockwise to richen the mixture.




The minimum to maximum range of pilot screw adjustment is 1 to 1 3/4 turns out from the lightly seated position. If you exceed 1 3/4 turns out, the next larger slow jet is needed. If you are under 1 turns out, the next smaller slow jet is needed.

# Carburetor Adjustments & Tuning Tips

## STANDARD TUNING RECOMMENDATIONS

For the following recommendations to be accurate, you must use the standard settings as a baseline. Also, don't change any of the settings until you've determined what changes are necessary.

| Adjustment | TSX-C 125 SW - ***VM22*** Standard Settings |
|---|---|
| Pilot / Air Fuel Screw Opening | 1–3/4 Turns Out |
| Slow/Pilot Jet | #15 |
| Needle Clip Position | 3rd Groove |
| Main jet | #95 |

| Adjustment | TSX-C 140 BW - ***VM22*** Standard Settings |
|---|---|
| Pilot / Air Fuel Screw Opening | 1–3/4 Turns Out |
| Slow/Pilot Jet | #20 |
| Needle Clip Position | 3rd Groove |
| Main jet | #110 |

| Adjustment | TSX-C 140 BW - ***VM26*** Standard Settings |
|---|---|
| Pilot / Air Fuel Screw Opening | 1–3/4 Turns Out |
| Slow/Pilot Jet | #20 |
| Needle Clip Position | 3rd Groove |
| Main jet | #100 |

## ADJUSTMENTS FOR ALTITUDE & TEMPERATURE

All jetting recommendations are based on standard jetting with an unmodified engine. The following conditions can affect the fuel mixture

| Condition | Mixture Will Be | Adjust To | Component Affected |
|---|---|---|---|
| Cold Temperature | Lean | Richen | Main Jet (Jet Needle Stage) |
| Warm Temperature | Rich | Lean | |
| Dry Air | Lean | Richen | |
| High Humidity | Rich | Lean | |
| High Altitude | Rich | Lean | |

## SPECIAL TUNING CONDITIONS

There are some unique atmospheric conditions or situations that may require additional adjustments. It should not be necessary to go more than one jet size richer or leaner to fine tune your Thumpstar. If larger jetting changes are necessary, check for air leaks, blocked or restricted exhaust or fuel systems, or a dirty air cleaner.

| Condition | Main Jet Adjustment |
|---|---|
| Long Straights | Next Larger |
| Uphill Sections | |
| Sand | |
| Mud | |
| High Humidity | Next Smaller |
| Raining | |
| Hotter Than 113 °F (59 °C) | |

# Air Cleaner



Proper air cleaner maintenance is very important for off-road motorcycles. A dirty, watersoaked, worn-out, or defective air cleaner will allow dirt, dust, mud, and other impurities to pass into the engine.

Service the air cleaner more frequently if you ride in unusually wet or dusty areas. Your **Certified Motorcycle Mechanic** can help you determine the correct service interval for your riding conditions.

Your motorcycle's air cleaner has very specific performance requirements. Use a new Thumpstar Genuine air cleaner specified for your model or an air cleaner of equal quality.

**NOTICE:**

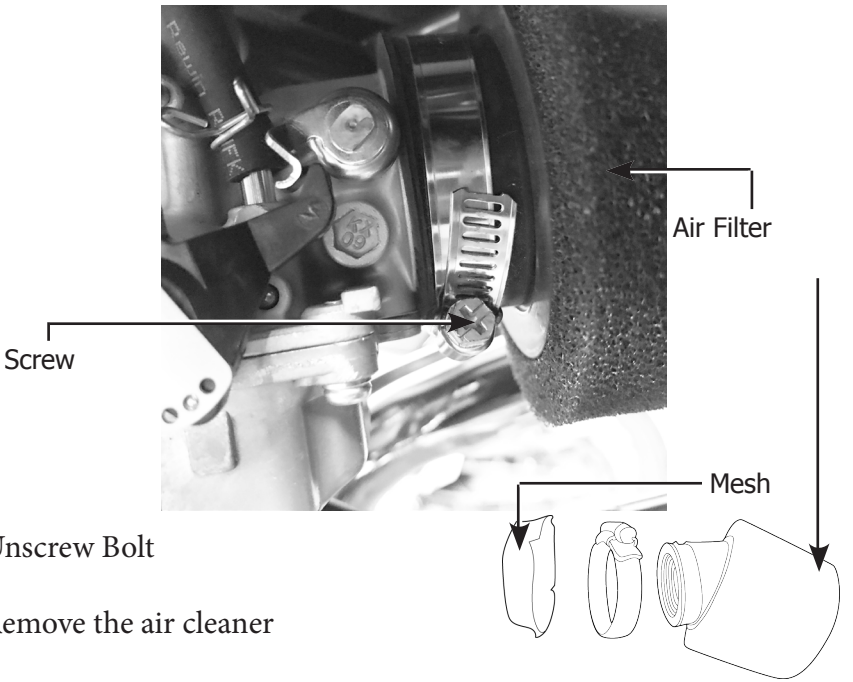
Using the wrong air cleaner may result in premature engine wear.

Proper air cleaner maintenance can prevent premature engine wear or damage, expensive repairs, low engine power, poor gas mileage, and spark plug fouling.

Improper or lack of proper air cleaner maintenance can cause poor performance and premature engine wear.

# Air Cleaner

## CLEANING




1. Unscrew Bolt

2. Remove the air cleaner

3. Gently wash the air cleaner in clean, nonflammable(high flash point) solvent such askerosene not gasoline. After cleaning,gently squeeze out the remaining solvent.Avoid twisting or wringing the air cleaner.This can tear the foam.

4. Inspect for tears or cracks in the foam orseams of the air cleaner. Replace the aircleaner if it is damaged.

5. Allow the air cleaner to dry thoroughly before applying oil. A wet air cleaner will not fully absorb the oil.

6. Check anti-flame mesh for damages

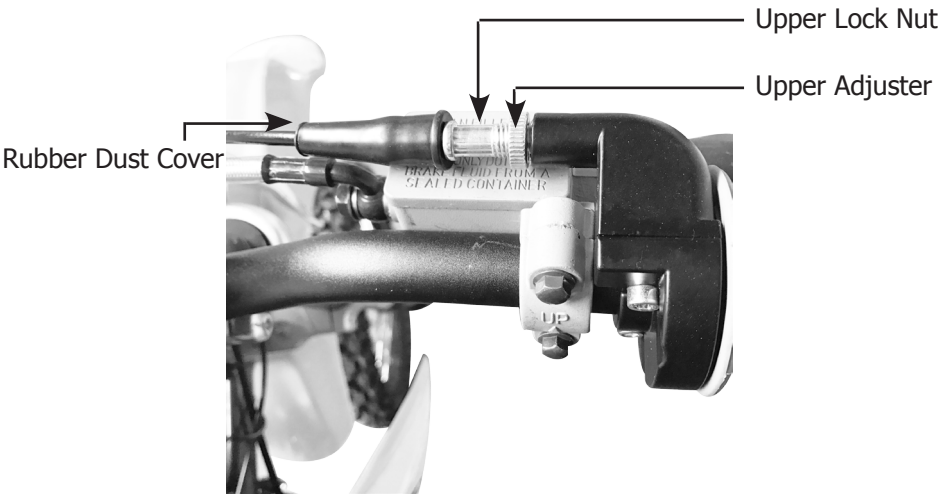
7. Pour clean No Toil Biodegradabe or an equivalent over the entire surface of the air cleaner. Use both hands to evenly spread the oil into the air cleaner. Gently squeeze out any excess oil.

8. Install the air cleaner and screws back again.

# Throttle

## UPPER ADJUSTMENT

Minor adjustments are generally made with the upper adjuster.




1. Pull the rubber dust cover back.
2. Loosen the upper lock nut on the throttle cable mechanism.
3. Turn the upper adjuster.
4. Tighten the lock nut. Return the dust coverto its normal position.
5. After adjustment, check for smooth rotationof the throttle grip from fully closed to fullyopen in all steering positions.

## SECOND ADJUSTMENT

The second adjuster is used for major freeplay adjustment, such as after replacing the throttle cables or removing the carburetor. It is also used if you can not get the proper adjustment with the upper adjuster

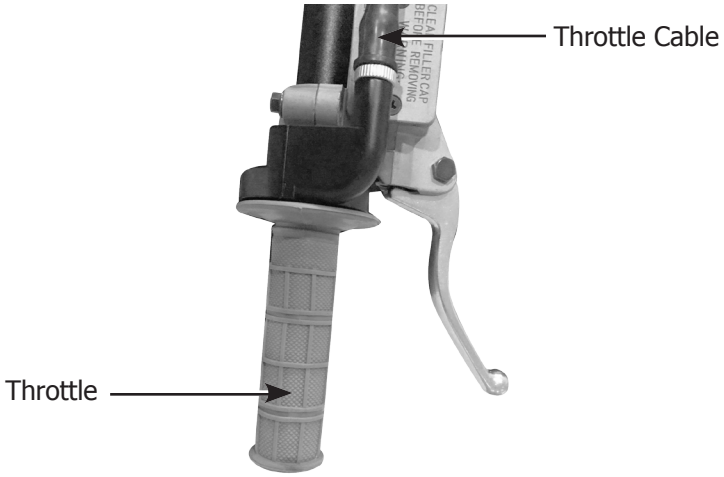

1. Loosen the locking nut.

2. Turn the second adjuster.

3. Tighten the locking nut.

Maintenance tip: Recommend using a service spray WD40 or equivalent inside the throttle cable housing and throttle

## THROTTLE INSPECTION




1. Check that the throttle assembly is positioned properly and the securing bolts are tight.

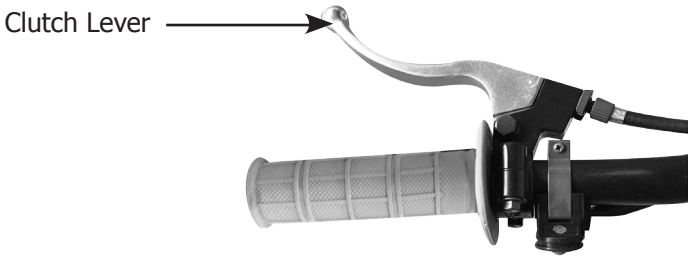
2. Check for smooth rotation of the throttle from fully open to fully closed in all steering positions. If there is a problem, see your **Certified Motorcycle Mechanic**

3. Inspect the condition of the throttle cables from the throttle grip down to the carburetor. If the cable is kinked or chafed, have it replaced.

4. Check the cables for tension or stress in all steering positions

5. Lubricate the cables with a commercially available cable lubricant to prevent premature rust and corrosion. (ie: WD40 or similar product)

## CLUTCH FREEPLAY



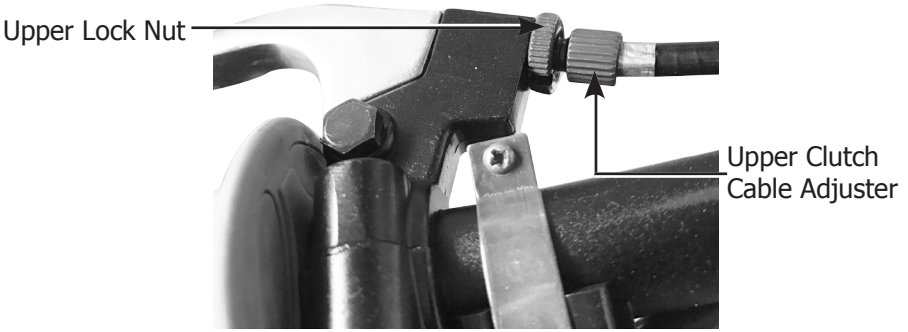

## INSPECTION

Check Freeplay

If necessary, adjust to the specified range. Improper freeplay adjustment can cause premature clutch wear.

## UPPER ADJUSTMENT

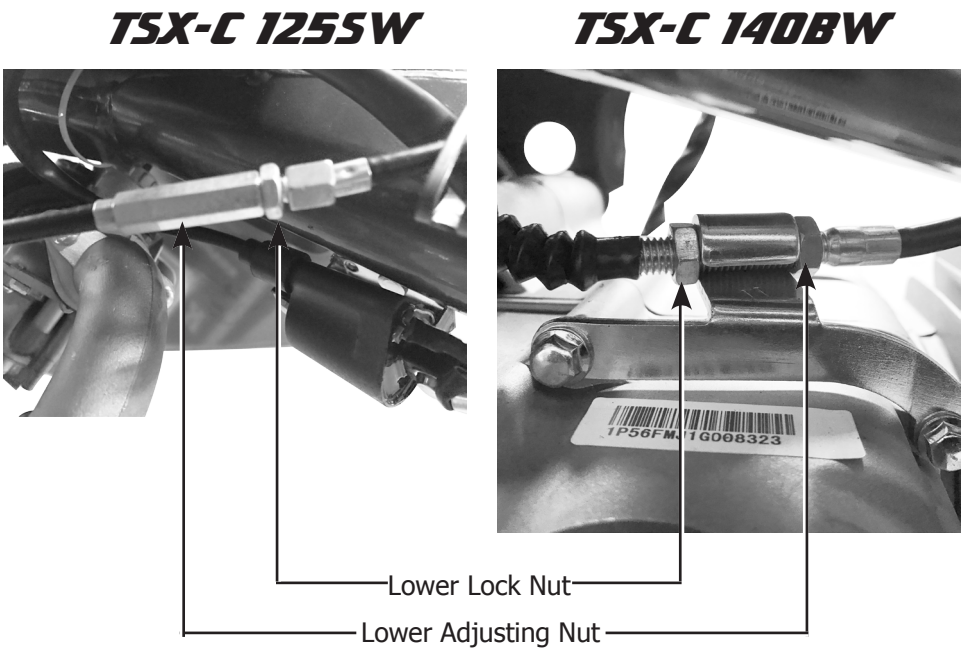
Minor adjustments are generally made with the upper clutch cable adjuster.




1. Loosen the upper lock nut.
2. Turn the upper clutch cable adjuster to obtain the specified freeplay.
3. Tighten the lock nut and check the freeplay again.
4. Return the dust cover to its normal position.

## LOWER ADJUSTMENT

The lower clutch cable adjuster is used if the upper clutch cable adjuster is threaded out near its limit or the correct freeplay cannot be obtained.




1. Loosen the upper lock nut and turn the upper clutch cable adjuster all the way in.
2. Tighten the upper lock nut and pull the dust cover back to its normal position.
3. Hold the lower adjusting nut and loosen the lower lock nut at the lower end of the cable.
4. Turn the lower adjusting nut to obtain the specified freeplay
5. Hold the lower adjusting nut and tighten the lower lock nut. Check the adjustment.
6. Start the engine, pull the clutch lever in, and shift into gear. Make sure the engine does not stall and the motorcycle does not creep. Gradually release the clutch lever and open the throttle. Your motorcycle should move smoothly and accelerate gradually.

# Valve Clearance



Excessive valve clearance will cause noise and eventual engine damage. Little or no clearance will prevent the valve from closing and cause valve damage and power loss. Check valve clearance when the engine is cold at the intervals specified in the Maintenance Schedule.

The checking or adjusting of the clearance should be performed while the engine is cold. The clearance will change as engine temperature rises.

1. Remove the cylinder head cover by removing the bolts and mount rubbers.

2. Remove the cylinder head cover gasket.

3. Remove the crankshaft hole cap and timing hole cap

4. Rotate the generator flywheel counterclockwise until the T mark on the flywheel lines up with the index mark on the left crankcase cover. In this position, the piston may either be on the compression or exhaust stroke.

   The adjustment must be made when the piston is at the top of the compression stroke when both the intake and exhaust valves are closed. This condition can be determined by moving the rocker arms. If they are free, it is an indication that the valves are closed and that the piston is on the compression stroke. If they aretight and the valves are open, rotate the flywheel 360° and realign the T mark to the index mark.

5. Check the clearance of both valves by inserting a feeler gauge between the adjusting screw and the valve stem.

   Clearance should be:

   Intake: 0.003” in

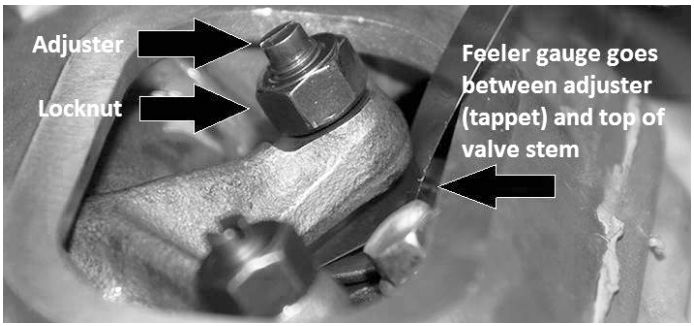
   Exhaust: 0.005” in

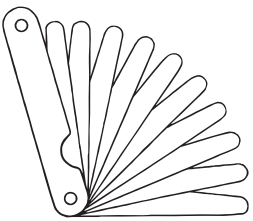
# Valve Clearance

6. If it is necessary to make an adjustment, loosen the adjusting screw lock nut and turn the adjusting screw so there is a slight resistance when the feeler gauge is inserted.

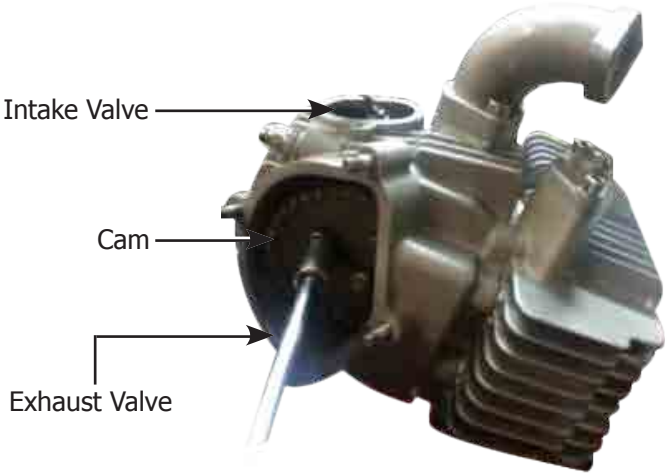
   After completing the adjustment, tighten the adjusting screw lock nut while holding the adjusting screw to prevent it from turning. Finally, recheck the clearance to make sure that the adjustment has not been disturbed.

7. Check that the mount rubbers in good condition. Install the mount rubbers onto the cylinder head cover with the "UP" mark facing up. Install a new gasket onto cylinder head cover. Install the cylinder head. Install and tighten the cylinder head cover bolts.



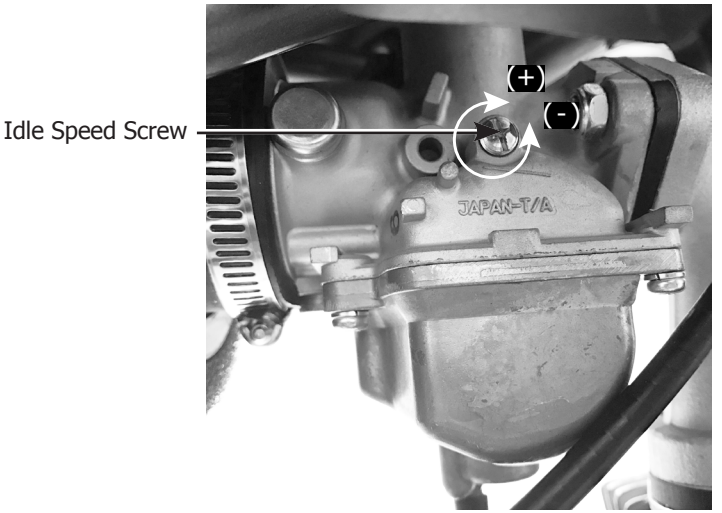
Feeler Gauge



# Engine Idle Speed



The engine must be at normal operating temperature for accurate idle speed adjustment. Ten minutes of stop-and-go riding is sufficient.




Do not attempt to compensate for faults in other systems by adjusting idle speed. See your **Certified Motorcycle Mechanic** for regularly schedule carburetor adjustments.

1. Warm up the engine, shift to neutral and place the motorcycle on its stand.

2. Adjust idle speed screw with a screw driver.

Idle Speed: 1,400 ± 100 rpm

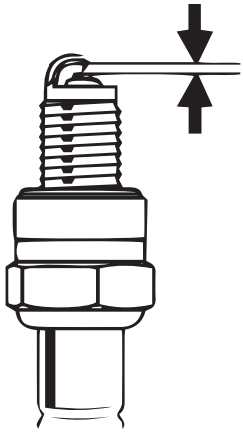
# Spark Plug

## SPARK PLUG RECOMMENDATION

The recommended standard spark plug is satisfactory for most riding conditions.

| | |
|---|---|
| Brand / Model | Torch A7TC \| NGK C7HSA |

Use only the recommended type of spark plugs in the recommended heat range.



**NOTICE:**

Using spark plugs with an improper heat range can cause engine damage.

1. Clean any dirt from around the spark plug base.

2. Disconnect the spark plug cap.

3. Remove the spark plug with a plug wrench.

4. Inspect the spark plug electrodes for wear. The center electrode should have square edges. The side electrode should not be eroded. The insulator should not be crackedor chipped.

# Spark Plug

5. Check the spark plug gap, using a wiretype feeler gauge. If adjustment is necessary, bend the side electrode carefully. The gap should be: 0.03-0.04 in (0.8-0.9 mm) Make sure the plug washer is in good condition. If you have to install a new plug, first check the gap.

6. With the plug washer attached, thread the spark plug in by hand (to prevent crossthreading).

7. Tighten the spark plug:

- If the old plug is good: 1/6 turn after it seats.

- If installing a new plug, tighten it twice to prevent loosening:

    a) First, tighten the plug: NGK: 1/4 turn after it seats.

    b) Then loosen the plug.

    c) Next, tighten the plug again: 1/6 turn after it seats.

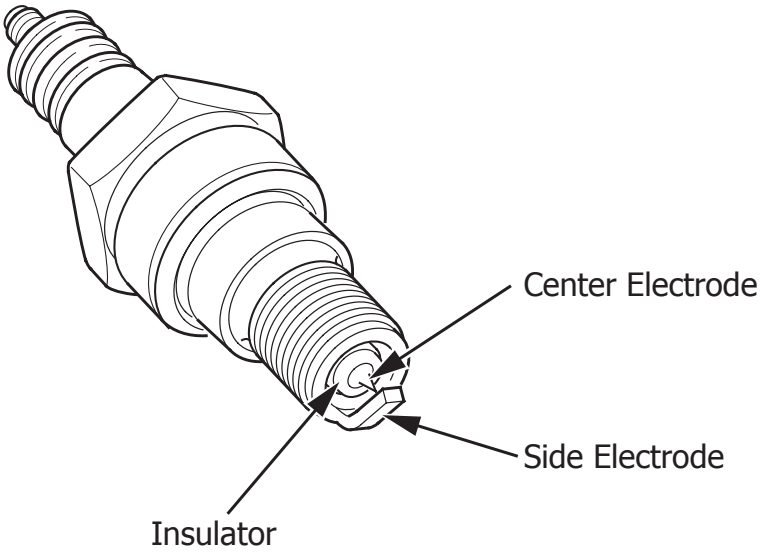
**NOTICE:**

An improperly tightened spark plug can damage the engine. If a plug is too loose, a piston may be damaged. If a plug is too tight, the threads may be damaged.

8. Reinstall the spark plug cap. Take care to avoid pinching any cables or wires.

***Note:*** An improperly tightened spark plug can damage the engine. If a plug is too loose, a piston may be damaged. If a plug is too tight, the threads may be damaged.

# Spark Plug




## SPARK PLUG COLORING GUIDELINES

| Condition | Spark Plug Appearance | Mixture |
|---|---|---|
| Normal | Dark Brown to Light Tan color with Dry Electrode | Correct |
| Overheating (Lean) | Light Gray or White Color | Lean |
| Wet (Rich) | Wet or Sooty | Rich |

Remember that in addition to improper jetting:

• A lean condition can be caused by air leaks in the inlet tract or exhaust system, the passage of too much air because of the use of the wrong air cleaner, use of a less-restrictive aftermarket exhaust system, or a hole or holes (deliberate or unintentional) in the air box.

• A rich condition can be caused by a plugged or dirty air cleaner, use of a more-restrictive aftermarket exhaust system, a clogged spark arrester, or excessive oil on the air cleaner. Excessive smoking will occur.

# Appearance Care



Frequent cleaning and polishing will keep your Thumpstar looking newer longer. Frequent cleaning also identifies you as an owner who values your motorcycle. A clean motorcycle is also easier to inspect and service.

While you're cleaning, be sure to look for damage, wear, and gasoline or oil leaks.

## GENERAL RECOMMENDATIONS

- To clean your motorcycle, you may use:
  - -Water
  - -A mild, neutral detergent and water
  - -A mild spray and wipe cleaner/polisher
  - -A mild spray and rinse cleaner/degreaser and water

- Avoid products that contain harsh detergents or chemical solvents that could damage the metal, paint, and plastic on your motorcycle.

- If your motorcycle is still warm from recent operation, give the engine and exhaust system time to cool off.

- We recommend the use of a garden hose to wash your motorcycle. High pressure washers (like those at coin-operated car washes) can damage certain parts of your motorcycle. If you use a high pressure washer, avoid spraying the following areas:
  - -air filter
  - -wheel hubs
  - -muffler outlet
  - -area under seat
  - -engine stop switch
  - -under fuel tank
  - -carburetor
  - -drive chain

**NOTICE:**
High pressure water (or air) can damage certain parts of your motorcycle.

# Appearance Care

## WASHING YOUR MOTORCYCLE WITH A MILD DETERGENT

1. Rinse your motorcycle thoroughly with cool water to remove loose dirt.
2. Fill a bucket with cool water. Mix in a mild, neutral detergent, such as dish washing liquid or a product made especially for washing motorcycles or automobiles.
3. Wash your motorcycle with a sponge or a soft towel. As you wash, check for heavy grime. If necessary, use a mild cleaner/ degreaser to remove the grime.
4. After washing, rinse your motorcycle thoroughly with plenty of clean water to remove any residue.
5. Dry your motorcycle with a chamois or a soft towel. Leaving water on the surface to air dry can cause dulling and water spots. As you dry, inspect for chips and scratches.
6. Lubricate the drive chain to prevent rusting.
7. Start the engine and let it idle for several minutes. The engine heat will help dry moist areas.
8. As a precaution, ride at a slow speed and apply the brakes several times. This will help
9. dry the brakes and restore normal braking
10. performance.

## EXHAUST PIPE AND MUFFLER MAINTENANCE

When the exhaust pipe and muffler are painted, do not use a commercially available abrasive kitchen cleaning compound. Use a neutral detergent to clean the painted surface on the exhaust pipe and muffler. If you are not sure if your exhaust pipe and muffler are painted, contact your dealer.

## TIPS

Here's helpful advice on how to prepare for an off-road adventure, how to transport and store your Thumpstar unit, and how to be an environmentally responsible motorcycle owner.

Spraying WD40 or similar product on metal parts will help protect the motorcycle ***(never spray WD40 near the brakes)***

# Preparing for a Ride

A safe and enjoyable ride begins with good planning and preparation. Always ride with at least one other person in case you have trouble, and let someone know where you're going and when you expect to return.

Before riding in an unfamiliar area, find out in advance if you need special permits, get maps so you can study the terrain, and talk to other riders who know the area. The Forest Service and the Bureau of Land Management (USA only), the Ministry of Natural Resources (Canada only), riding clubs, and off-road magazines are good sources of information.

## WHAT TO TAKE TO THE RIDING AREA

Along with your motorcycle and riding gear, you should take along some tools and supplies in case you have a problem.

We recommend that you always take water, food, a first aid kit, and your owner's manual. Other items you should consider loading on your truck or trailer include:

- a tool kit
- tire repair supplies and tools, tubes, and tires
- extra parts, such as a drive chain and master links, control levers, air filter, cables, and spark plugs
- wire, duct tape, and rope
- extra gasoline

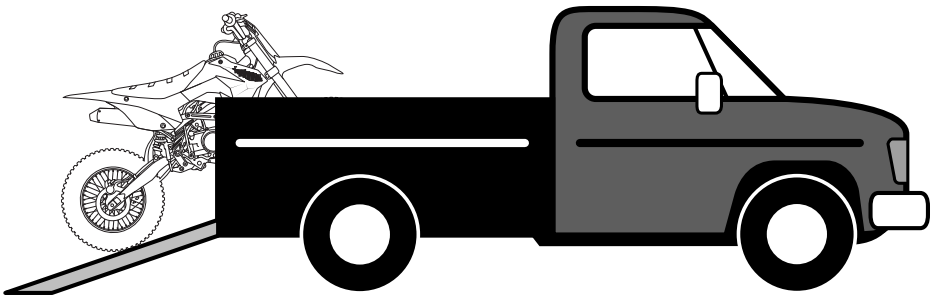
For safety, all refueling should be done at a gas station on the way to the riding area or at your base camp.

# Transporting your Thumpstar



If you use a truck or motorcycle trailer to transport your Thumpstar, we recommend that you follow these guidelines:

- Use a loading ramp.
- Make sure the fuel valve is off.
- Secure the motorcycle in an upright position, using motorcycle tie-down straps. Avoid using rope, which can loosen and allow the motorcycle to fall over.



To secure your Thumpstar motorcycle, brace the front wheel against the front of the truck bed or trailer rail. Attach the lower ends of two straps to the tie-down hooks on your motorcycle. Attach the upper ends of the straps to the handlebar (one on the right side, the other on the left), close to the fork.

## WHAT TO TAKE ON THE TRAIL

What you take with you during a ride depends on the kind of terrain, how long you expect to ride, how far you might go from your base camp or help, and how experienced you or your companions are in making repairs.

If you decide to take some tools, spare parts, or other supplies on the trail, be sure you can carry them safely and know how to use them. Also, be sure to follow the loading guidelines and weight limit.

Check that the tie-down straps do not contact any control cables or electrical wiring.

Tighten both straps until the front suspension is compressed about halfway. Too much pressure is unnecessary and could damage the fork seals.

Use another tie-down strap to keep the rear of the motorcycle from moving.

We recommend that you do not transport your motorcycle on its side. This can damage the motorcycle, and leaking gasoline could be a hazard.

## STORING YOUR THUMPSTAR MOTORCYCLE

If you won't be riding for an extended period, such as during the winter, thoroughly inspect your motorcycle and correct any problem before storing it. That way, needed repairs won't be forgotten and it will be easier to get your motorcycle running again.

## PREPARATION FOR STORAGE

1. Change the engine oil

2. Fill the fuel tank. Make sure the fuel fill cap is properly installed.

3. Check that the fuel valve is OFF.

4. Drain the carburetor into an approved gasoline container and dispose of it in an approved manner. If storage will last longer than one month, carburetor draining is important, to assure proper performance after storage.

5. Store it in an area protected from freezing temperatures and direct sunlight.

6. Wash and dry your motorcycle.

7. Lubricate the drive chain.

8. Inflate the tires to their recommended pressures

9. Store your motorcycle in an unheated area, free of dampness, away from sunlight, with a minimum of daily temperature variation.

10. Cover your motorcycle with a porous material. Avoid using plastic or similar nonbreathing, coated materials that restrict air flow and allow heat and moisture to accumulate.

## REMOVAL FROM STORAGE

1. Uncover and clean your motorcycle.

2. If your motorcycle has been stored for more than four months change the engine oil

3. If your motorcycle has been stored for more than two months drain and replace the fuel.

4. Lubricate the drive chain

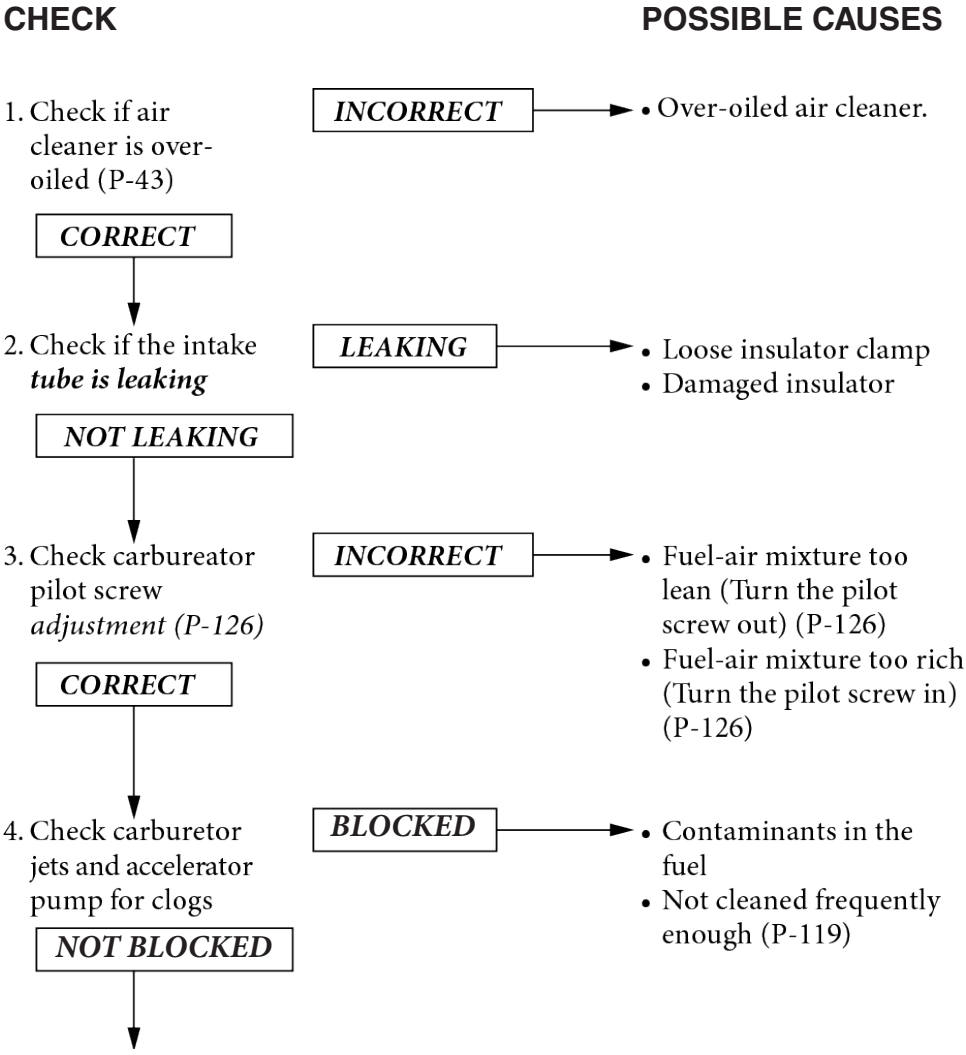
5. Perform a pre-ride inspection, then test-ride your motorcycle at low speeds.

# Troubleshooting



The items that are serviceable using this Manual are followed by the page number reference in parenthesis. The items that require use of the Thumpstar Manual are followed by an asterisk.

## POOR PERFORMANCE AT LOW AND UNSTABLE IDLE SPEED



5. Try spark test

***GOOD SPARK***

***WAKE OR INTERMITTENT SPARK*** →

- Faulty, carbon or wet fouled spark pulg (P-55)
- Faulty ignition control module*
- Faulty alternator*
- Faulty ignition coil*
- Broken or shorted spark plug wire.
- Faulty ignition pulse generator*.

6. Check for low compression.

***CORRECT***

***LOW*** →

- Ring worn
- Cylinder worn or damaged
- Piston worn or damaged
- Head gasket not sealing

## POOR PERFORMANCE AT LOW AND UNSTABLE IDLE SPEED

**CHECK** **POSSIBLE CAUSES**

1. Disconnect fuel line at carburetor and check for clogging (P-34)

***UNRESTRICTED FUEL FLOW***

***FUEL FLOW RESTRICTED*** →

- Lack of fuel in tank (P-34)
- Clogged fuel line (P-34)
- Clogged fuel fill cap breather tube (P-34)
- Clogged fuel valve (P-34)
- Clogged fuel filter (P-35)

2. Remove air cleaner (P-43)

***AIR FILTER NOT DIRTY***

***DIRTY*** →

- Not cleaned frequently enough (P-43)

3. Install a larger carburetor main jet (P-126)

***CONDITION WORSE*** → • Jet size wrong, rejet in the opposite direction (P-126)

***CORRECT***

4. Check carbureator jets for clogging

***BLOCKED*** → • Contaminants in the fuel

***NOT BLOCKED***

5. Check valve timing

***INCORRECT*** → • Cam sprocket not installed properly

***CORRECT***

***6. Try spark test***

***WEAK OR INTERMITTENT SPARK*** →
- Faulty, carbon or wet fouled spark pulg (P-55)
- Faulty ignition control module*
- Faulty alternator*
- Faulty ignition coil*
- Broken or shorted spark plug wire.
- Faulty ignition pulse generator*.

***GOOD SPARK***

***7. Check for low compression.***

***LOW*** →
- Ring worn
- Cylinder worn or damaged
- Piston worn or damaged
- Head gasket not sealing

***CORRECT***

# You & the Environment



Owning and riding a motorcycle can be enjoyable, but you must do your part to protect nature. When you show respect for the land, wildlife, and other people, you also help preserve the sport of off-road riding.

Following  are tips on how you can be an environmentally responsible motorcycle owner.

Tread Lightly - Stay on existing roads and trails, avoid surfaces that are easily damaged, and ride only in areas approved for off-road motorcycles

Keep the Noise Down - Loud motorcycles can be offensive. Ride as quietly as possible, don't modify the muffler or any other part of your air intake and exhaust systems. Such modifications not only increase noise, they also reduce engine performance andmay be illegal.

Choose Sensible Cleaners - Use a biodegradable detergent when you wash your motorcycle. Avoid aerosol spray cleaners that contain chlorofluoro carbons (CFCs) which damage the atmosphere's protective ozone layer. Don't throw cleaning solvents away; see the following guidelines for proper disposal.

RecycleWastes - It's illegal and thoughtless to put used engine oil in the trash, down a drain, or on the ground. Used oil, gasoline, and cleaning solvents contain poisons that can hurt refuse workers and contaminate our drinking water, lakes, rivers, and oceans. Before changing your oil, make sure you have the proper containers. Put oil and other toxic wastes in sepa rate sealed containers and take them to a recycling center. Call your local or state office of public works or environmental services to find a recycling center in your area and get instructions on how to dispose of non-recycla ble wastes.

# Taking care of the Unexpected



With all the challenges you can encounter offroad, there's a chance that sometime something may go wrong. This section gives practical advice to help you deal with a wide range of problems. Take time to read this section before you ride.

## GENERAL GUIDELINES

If something goes wrong during a ride, the first thing to do is stop as soon as you safely can. Do not continue riding if you have a flat tire, or you hear an unusual noise, or your motorcycle just doesn't feel right. If you continue riding, you could cause more damage and endanger your own safety.

After a stop, take time to assess the situation. Carefully inspect your motorcycle to identify the problem, then consider your options before you decide what to do.

If a problem is relatively minor and you have the tools, supplies, and skills to make a permanent repair, you may be able to fix it on the trail and continue riding. Or, you may be able to make a temporary repair that allows you to slowly ride back to your base where you can make a permanent repair or get help.

When a problem is more serious or you don't have the tools, supplies, experience, or time to deal with it you need to choose the safest way to get yourself and your motorcycle back to base. For example, if you are close enough, you (or you and another person) might be able to push it back.

Whatever the problem, the most important rules are:

- Always put personal safety first.
- If you made temporary repairs, be sure to have permanent repairs made as soon as possible.
- Do not continue riding if you are hurt or your motorcycle is not in safe riding condition.

Additional recommendations for specific problems follow.

## IF YOUR ENGINE QUITS OR WON'T START

If you have a problem starting the engine or experience poor engine performance the following information may help you. If you can't correct the problem, see or talk to your Thumpstar **Certified Motorcycle Mechanic**.

| SYMPTOM | Engine starts, but runs poorly. |
|---|---|
| POSSIBLE CAUSE | WHAT TO DO |
| idles roughly, too fast, stalls | Check engine idle adjustment. Check fuel hose is not blocked. If the problem persists, see or talk to your Thumpstar **Certified Motorcycle Mechanic**. |
| runs erratically, misfires | See or talk to your Thumpstar **Certified Motorcycle Mechanic**. |
| blubbers (rich fuel mixture) | See or talk to your Thumpstar **Certified Motorcycle Mechanic**. |
| sooty exhaust (rich fuel mixture) | See or talk to your Thumpstar **Certified Motorcycle Mechanic**. |
| detonates or pings under load | If applicable, switch to the recommended octane gasoline or change your brand of gasoline. If the problem persists, see your **Certified Motorcycle Mechanic**. |
| afterfires (backfires) | See or talk to your Thumpstar **Certified Motorcycle Mechanic**. |
| pre-ignition (runs on after ignition switched OFF) | See or talk to your Thumpstar **Certified Motorcycle Mechanic**. |

| SYMPTOM | Fuel leaks from carburetor overflow |
|---|---|
| POSSIBLE CAUSE | WHAT TO DO |
| float not adjusted right | Remove carburetor and adjust float correctly |
| debris blocking fuel shut-off valve | Remove caburetor and clean the jet |

| SYMPTOM | Does not start / kick start |
|---|---|
| POSSIBLE CAUSE | WHAT TO DO |
| faulty kill switch | Disconnect kill switch |
| no fuel | Check carburetors getting fuel by removing drain screw |
| no spark | Remove spark plug and do a spark test |

## IF YOU HAVE A FLAT TIRE

How you handle a flat tire on the trail depends on how serious the tube or tire damage is, and what tools and supplies you have with you.

If you have a slow leak or a minor puncture, there are two ways to try making a temporary repair:

- Use an aerosol tire sealer to seal the puncture and inflate the tube. (This can be done without removing the tire or wheel.)

- Use a tube patch kit to repair the puncture. (This requires removing the tire.)

If the leak is more serious, or a temporary repair doesn't hold, the tube must be replaced. The tire will also need to be replaced if it is damaged. Replacing a tube or tire involves removing and re-installing the wheel.

If you are unable to repair a flat tire on the trail, you will need to push the motorcycle back to your base or send for help. We strongly recommend that you do not try to ride with a flat tire. The motorcycle will be hard to handle, and if the tire comes off the rim, it may lock up the wheel and cause you to crash.

**⚠ WARNING**

**Riding your motorcycle with a temporary tire repair can be risky. If the temporary repair fails, you can crash and be seriously injured or killed. If you must ride with a temporary tire repair, ride slowly and carefully until the tire is permanently repaired or replaced.**

## IF YOU CRASH

Personal safety is your first priority after a crash. If you or anyone else has been injured, take time to assess the severity of the injuries and whether it is safe to continue riding. If you cannot ride safely, send someone for help. Do not ride if you will risk further injury.
If you decide that you are capable of riding safely, first evaluate the condition of your motorcycle. If the engine is still running, turn it off and look it over carefully; inspect it for fluid leaks, check the tightness of critical nuts and bolts, and secure such parts as the handlebar, control levers, brakes, and wheels.
If there is minor damage, or you are unsure about possible damage but decide to try riding the motorcycle back to your base, ride slowly Personal safety is your first priority after a and cautiously.
Sometimes, crash damage is hidden or not immediately apparent. When you get home, thoroughly check your motorcycle and correct any problems you find. Also, be sure to have your **Certified Motorcycle Mechanic** check the frame and suspension after any serious crash.

## IF A COMPONENT FAILS

The drive chain, master link, brake lever or pedal, control cables, and other components can be damaged as you ride in dense brush or over rocky terrain. Making a trailside repair depends on how serious the damage is and what tools and supplies you have with you.

- If the drive chain comes off because the master link clip gets knocked off, you may be able to put the chain back on with a new master link. However, if the chain brakes or does other damage when it comes off, you may not be able to make a trailside repair.
- If any component of the front brake system is damaged, you may be able to ride carefully back to your base using the rear brake for slowing or stopping.
- If you damage a throttle cable or other critical component, your motorcycle may be unsafe to ride. Carefully assess the damage and make any repairs that you can. But if there is any doubt, it's best to be conservative and safe.

# Vehicle Identification



This section contains technical information by how to identify your motorcycle


**VIN PLATE**


**ENGINE NUMBER**

***VIN:*** Vehicle Identification Number is a serial number to identify your Thumpstar

***Engine:*** The first 6-7 digit is the engine model number, usually letters and numbers which purpose is for spare parts and detailed specifications. The 2nd group of numbers usually 9 digit is similar to your VIN which is a serial number to identify your particular engine.

"1P44FZB" engine model "160726227" engine serial number

***Model No:*** To identify the model of your Thumpstar

***Displacement:*** Engine size of your Thumpstar

***Version No:*** To identify which version your model is, Thumpstar models are categorized by version number rather than by model year, so to find the correct OEM parts you will need the version number.

Tip: if a model is a version 1, 1.1, 1.2, 1.3 they are all in the same version family, meaning that 95% of the spare parts will be the same, usually a change in color or minor part like carburetor or exhaust system. If is a version 2, 2.1 then major componants have been changed like plastics, frame or engine.

***Max Weight:*** Maximum weight a rider can be to operate this motorcycle

***Net Weight:*** The total weight of your motorcycle.

***Date:*** This is the date of manufacture and does not determine the model year or version number

# Oxygenated Fuels



Some conventional gasolines are being blended with alcohol or an ether compound. These gasolines are collectively referred to as oxygenated fuels. To meet clean air standards, some areas of the United States and Canada use oxygenated fuels to help reduce emissions.

If you use an oxygenated fuel, be sure it is unleaded and meets the minimum octane rating requirement.

Before using an oxygenated fuel, try to confirm the fuel's contents. Some states/ provinces require this information to be posted on the pump.

The following are the EPA-approved percentages of oxygenates:

ETHANOL (ethyl or grain alcohol) 10% by Volume.
You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol'

MTBE (Methyl Tertiary Butyl Ether) 15% by Volume
You may use gasoline containing up to 15% MTBE by volume.

METHANOL (methyl or wood alcohol) 5% by Volume
You may use gasoline containing methanol containing up to 5% methanol by volume as long as it contains cosolvents and corrosion inhibitors to protect the fuel system. Gasoline containing more than 5% methanol by volume may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of your fuel system.

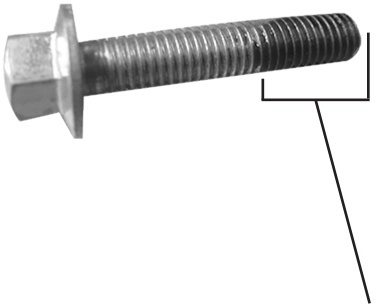
If you notice any undesirable operating symptoms, try another service station or switch to another brand of gasoline.

Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentages of oxygenates mentioned above are not covered under warranty.

Oxygenated fuels can damage paint and plastic. Be careful not to spill fuel when filling the fuel tank. Wipe up any spills immediately.

# Torque Settings

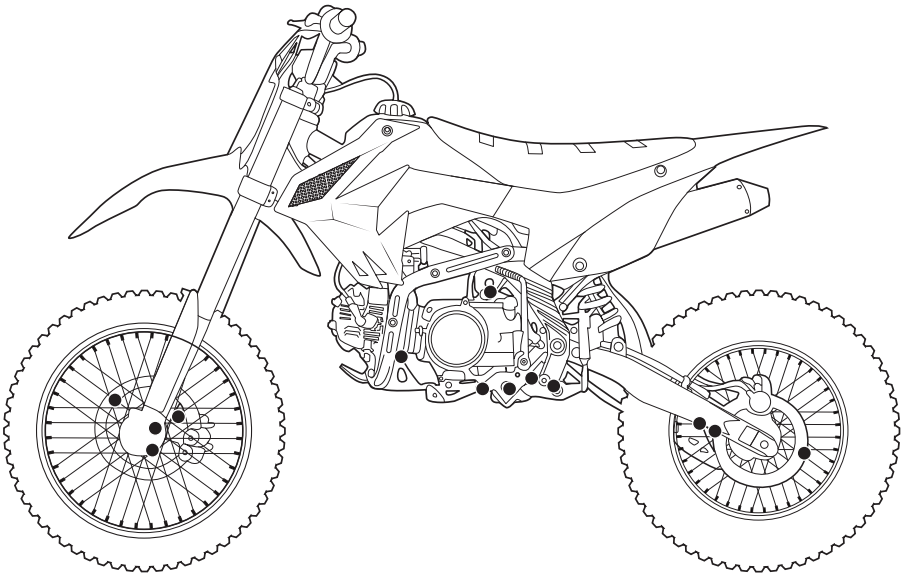
## USE BLUE MEDIUM STRENGTH THREAD LOCK GLUE

***NOTE:***

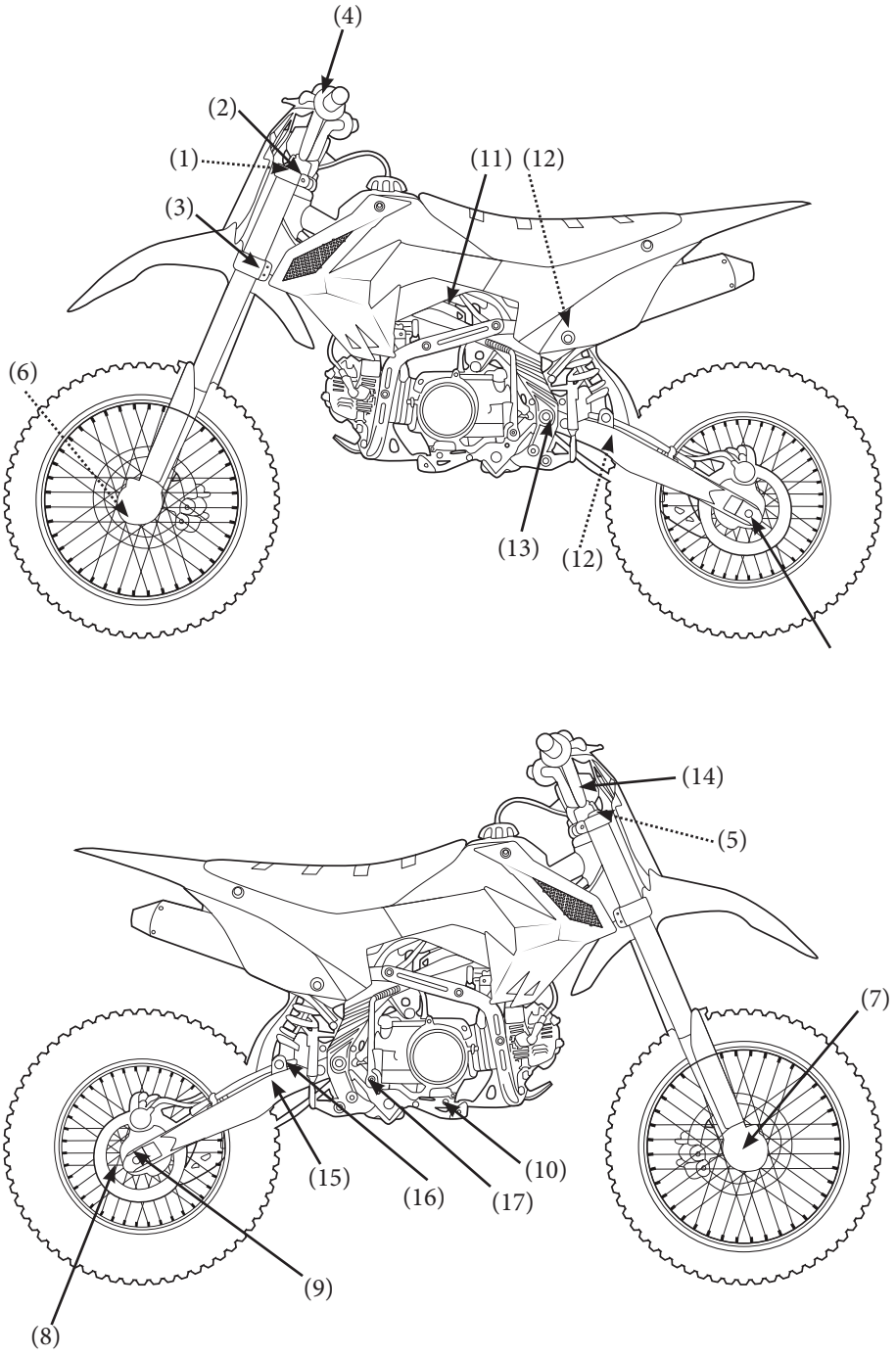
Put glue on tip of the bolt for glue to work correctly.

● ←Places to use Thread Lock Glue



# Torque Settings



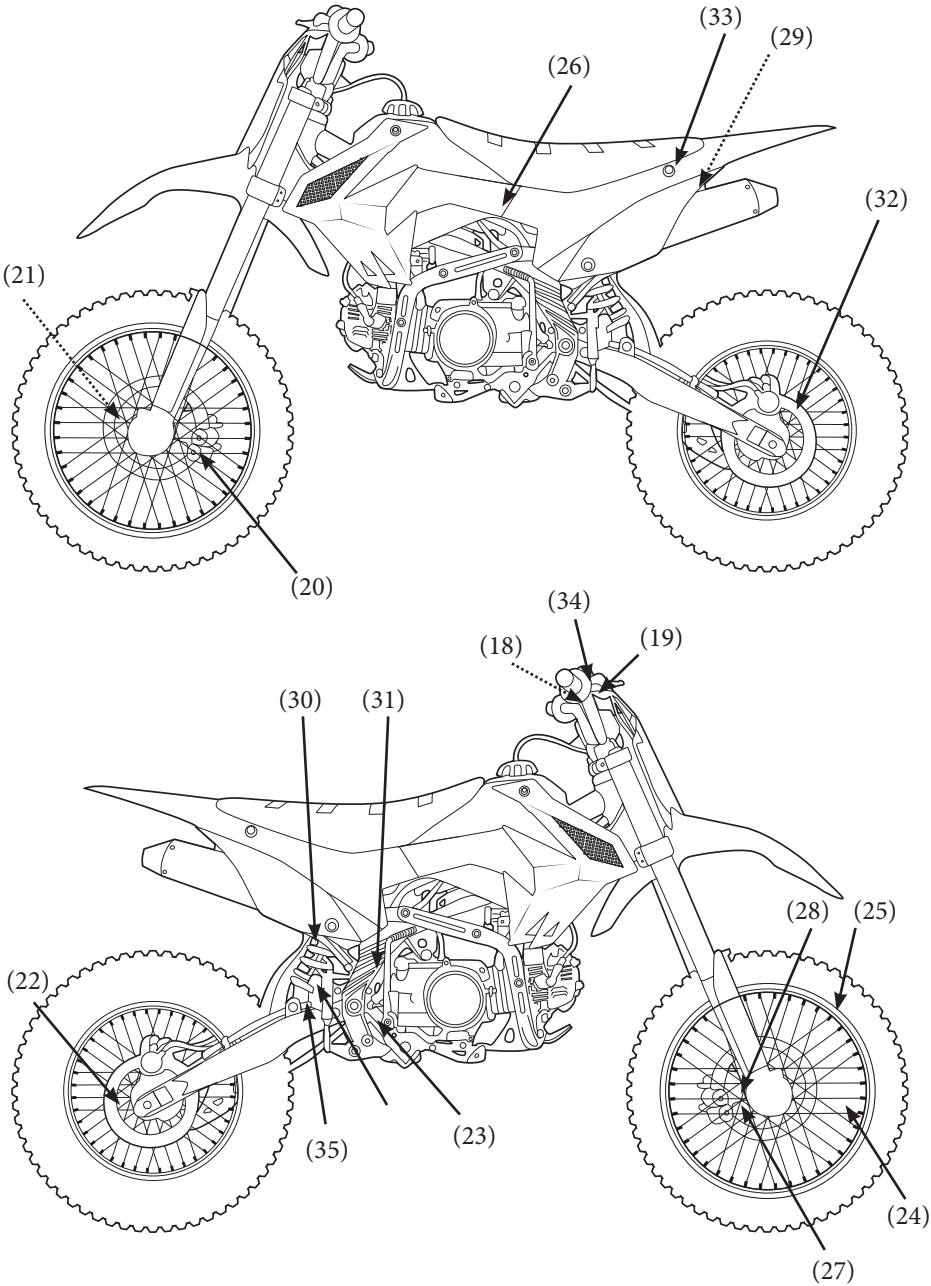


# Torque Settings



| | ITEM | | TORQUE | | |
|---|---|---|---|---|---|
| | | | lbf.ft | N.m | kgf.m |
| | ***FRAME*** | | | | |
| 1 | Steering stem nut | | 80 | 108 | 11.0 |
| 2 | Fork bridge upper pinch bolts | | 16 | 22 | 2.2 |
| 3 | Fork bridge lower pinch bolts | | 15 | 20 | 2.0 |
| 4 | Handlebar upper holder bolts | | 16 | 22 | 2.0 |
| 5 | Handlebar holder nuts | | 32 | 44 | 4.5 |
| 6 | Front axle nut | | 65 | 88 | 9.0 |
| 7 | Front axle pinch bolts | | 15 | 20 | 2.0 |
| 8 | Rear axle nut | | 94 | 128 | 13.1 |
| 9 | Chain adjuster lock nuts | | 20 | 27 | 2.8 |
| 10 | Mid engine hanger bracket nut | | 47 | 64 | 6.5 |
| 11 | Upper engine hanger plate nuts | (engine side) | 40 | 54 | 5.5 |
| | | (frame side) | 25 | 34 | 3.5 |
| 12 | Shock absorber | (upper) | 32 | 44 | 4.5 |
| | | (lower) | 32 | 44 | 4.5 |
| 13 | Swingarm pivot nut | | 65 | 88 | 9.0 |
| 14 | Fork | (fork damper) | 25 | 34 | 3.5 |
| | | (fork cap) | 22 | 30 | 3.1 |
| 15 | Rear shock arm nuts | (swingarm side) | 39 | 53 | 5.4 |
| | | (shock link side) | 39 | 53 | 5.4 |
| 16 | Rear shock link nuts | | 39 | 53 | 5.4 |
| 17 | Kickstarter arm bolt | | 28 | 38 | 3.9 |

# Torque Settings



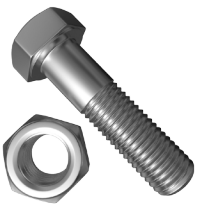
# Torque Settings



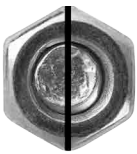
| | ITEM | | TORQUE | | |
|---|---|---|---|---|---|
| | | | lbf.ft | N.m | kgf.m |
| | ***FRAME*** | | | | |
| 18 | Front brake master cylinder holder bolts | | 7 | 9.9 | 1.0 |
| 19 | Brake hose bolts | | 25 | 34 | 3.5 |
| 20 | Caliper mounting bolts | | 22 | 30 | 3.1 |
| 21 | Front brake disc nuts | | 12 | 16 | 1.6 |
| 22 | Rear brake disc nuts | | 12 | 16 | 1.6 |
| 23 | Brake pedal pivot bolt | | 27 | 36 | 3.7 |
| 24 | Spoke | (front) | 2.7 | 3.68 | 0.4 |
| | | (rear) | 2.7 | 3.7 | 0.4 |
| 25 | Rim locks | | 9 | 12 | 1.2 |
| 26 | Subframe bolts | (upper) | 22 | 30 | 3.1 |
| | | (Iower) | 36 | 49 | 5.0 |
| 27 | Fork center bolt | | 51 | 69 | 7.0 |
| 28 | Fork protector bolts | | 5.2 | 7 | 0.7 |
| 29 | Muffler mounting bolts | (right) | 19 | 26 | 2.7 |
| | | (left) | 19 | 26 | 2.7 |
| 30 | Exhaust joint pipe mounting bolt | | 19 | 26 | 2.7 |
| 31 | Exhaust joint pipe clamp bolt | | 15 | 21 | 2.1 |
| 32 | Driven sprocket nuts | | 24 | 32 | 3.3 |
| 33 | Seat mounting bolts | | 19 | 26 | 2.7 |
| 34 | Front brake reservoir cap screws | | 0.7 | 1.0 | 0.1 |
| 35 | Rear brake reservoir cap bolts | | 0.7 | 1.0 | 0.1 |

*Maintenance Tip:

Use a paint marker reference pen to reference mark each bolt after checking the torque settings.



(Bolt is tight)



(Bolt is loose)

Paint Pen

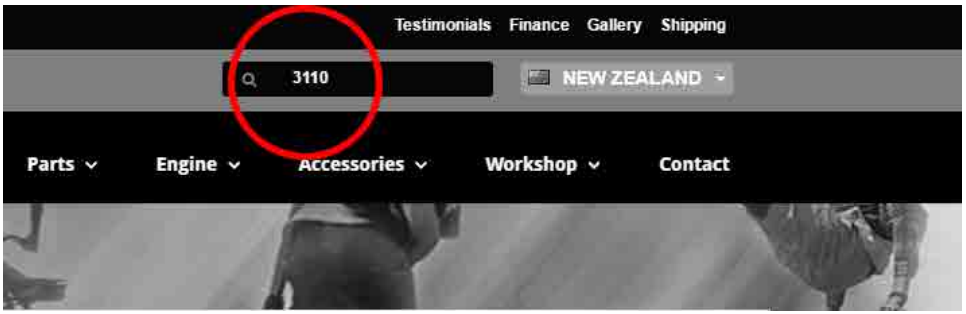
This will ensure you can visually check each bolt is tight at the track.

# Parts Finder

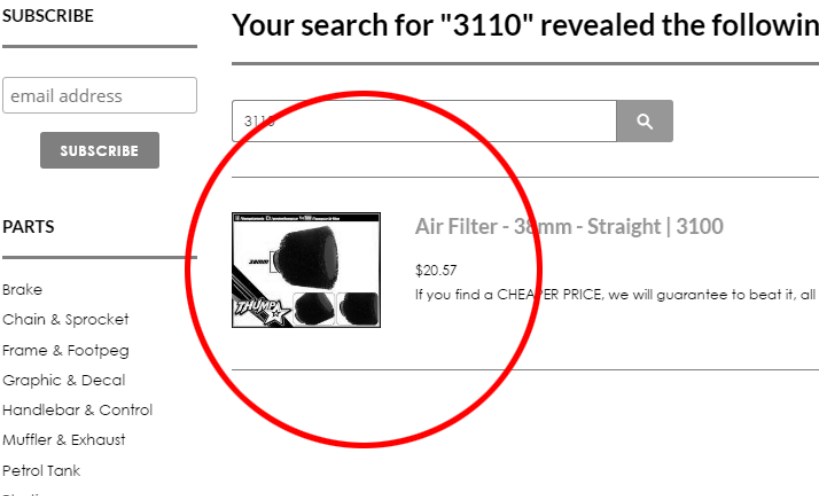
**Finding Parts at our website**

**Websites**
**https://www.tboltusa.com/**
**https://www.thumpstar.com.au/**
**https://www.thumpstar.co.nz/**

- **Go to our website then copy the part number or ERP CODE in our Spare Part Catalogue and paste it in the search bar then press enter or click the search icon beside it.**




- **After searching you will see the parts listed below the search bar**



# Warranty

## WARRANTY TERMS AND CONDITIONS

The Limited Warranty starts from the date of purchase of the new motorcycle by the customer. Thumpstar will cover PARTS AND FREIGHT ONLY. Thumpstar does not cover the labor required to remove or repair the motorcycle or part for warranty repair or replacement. (Unless otherwise negotiated) In some cases, replacement parts may have to be shipped from overseas and can take up to 8 weeks for delivery.

Purchasing a motorcycle in the crate without setup by a Thumpstar Authorized Dealer void the limited warranty.

Limited Warranty is not transferable and if valid for original purchaser only.

USA: Competition models are absence from a manufactures/limited warranty.

## WARRANTY CLAIMS

All warranty claims must be accompanied with the following information and attachments:

– Picture of the motorcycle

– Picture of the problem

– Picture of the VIN number

– Engine faults require a picture of the engine number

– Description of the problem

To file a warranty claim, please visit your local Thumpstar website, which is located in the footer of the website.

# Disclaimer



Serious risks involved in using any motorised vehicle, including but not limited to: serious physical injury and death. Thumpstar strongly recommends the use of safety equipment while riding. Appropriate safety equipment would include, but is not limited to approved D.O.T or ASNZ 1698 helmet, riding leathers, motorcycle gloves, body armour, knee pads/brace, and riding boots. It's the purchasers responsibility to make sure the instruction manual is followed before use, that this product is assembled by a qualified mechanic and to fully check the motorcycle before every ride for defects or potential defects, if any defects are found then the product should not be used until the defect has been repaired by a qualified mechanic, the purchaser shall use product at their own risk.

Thumpstar will not be held liable under any circumstance for incidental or consequential loss or damage or injury, due direct or indirect use of this product, including any malfunction or defect. This product is not a toy. This product is intended for experienced adult riders on a closed track. Thumpstar makes no claims as to the suitability of this bike for any specific purpose or user. The products in this manual are designed for competition use for a single rider with proper safety equipment. Thumpstar also recommends that any minors only use motorised vehicles under adult supervision and under the guardian's own discretion. Purchasers should check with their local authorities for area specific rules and regulations.

Adult guardian assumes all responsibilities associated with the use of these products by minors. It is not suitable for handicapped persons or persons with limited mental or physical capacities. Although there are no uniform legal age restrictions, Thumpstar recommends that only individuals of legal age use any of the motorised vehicles sold by us. Customers understand that the use of these products can cause injury or death to themselves or others. To reduce the risks of any such injuries we strongly recommend the use of the safety equipment such as an D.O.T, ANSI or Snell approved helmet and knee pads. The Buyer holds our company and its agents and affiliates harmless from any liability arising out of or relating to the use or ownership of any product. Buyer must obtain her/his own insurance. Purchaser fully accepts responsibility & releases the seller for all & any personal injuries, fatal injuries, any losses, costs, and damages incurred

# Disclaimer

as a result of Purchaser's operation of this item. Purchaser is solely responsible when permitting other riders to ride this item, and assumes all responsibility in event of damages, injuries or fatal injuries etc. Purchaser is responsible for understanding and obeying all local and state laws for operation of this product. Once purchaser submits payment this will serve as purchaser agreement to releasing seller of any and all responsibilities of item such as stated above. Before riding check your local states/cities motorcycle codes for more information regarding laws. This product is for use on closed private tracks only.

By purchasing, you acknowledge that you have read and understood, and you agree, to the terms and conditions of this Agreement, and you represent that you are of legal age (age 18 or older) to enter this Agreement and become bound by its term.

While all care is taken, any errors and omissions in the item details are unintentional. Therefore, Thumpstar cannot be held liable for any errors or omissions on these adverts.

## SERVICE MANUAL

| NAME OF SERVICE PERSON | DATE OF SERVICE | HOURS OF SERVICE | SIGNATURE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

*For more information on service go on page 37.

# Title Ownership



| NAME | BUYER SIGNATURE | SELLER SIGNATURE | DATE OF PURCHASE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |