

## Section 1 Difficult to Starting the Engine

<b>Trouble Phenomenon and Cause</b>		<b>Troubleshooting</b>
a. The engine is not rotated	1. Loose connection of battery electrode or insufficient power	Tighten or charge
	2. Open circuit	Check and repair
	3. Damaged engine	Repair or replace
b. The spark plug is not lighted	1. Poor earthing	Repair
	2. Damaged ignition coil	Replace
	3. Improper spark plug clearance or burnt	Adjust or replace
c. Oil supply system	1. Insufficient oil of gasoline pump	Repair or replace

malfunction	2. Gasoline hose and gasoline filter plug	Clean
d. Reduced cylinder compressed pressure	1. Broken cylinder gasket	Replace
	2. Improper adjustment of throttle valve clearance or damaged	Adjust, repair or replace
	3. Worn piston, piston ring and cylinder	Repair or replace

## Section 2 Sufficient Power in Running

No.	Trouble Phenomenon and Cause	Troubleshooting
1	Improper adjustment of accelerator pedal and throttle valve	Adjust
2	Reduced cylinder compressed pressure	1. Check throttle valve, spark plug, cylinder gasket for leakage. 2. Grind cylinder
3	Insufficient gasoline supply	Adjust or repair
4	Insufficient intake air	Check intake system
5	Air exhaust clogging	Check exhaust system and remove carbon deposit
6	Improper spark plug clearance or damaged	Adjust or replace

### **Section 3 Knocking Sound inside the Petrol Engine**

<b>No.</b>	<b>Trouble Phenomenon and Cause</b>	<b>Troubleshooting</b>
1	Worn bush, camshaft cam and rocker	Replace
2	Severe wear of camshaft, connecting rod neck and piston pin	Replace or repair
3	Damaged piston ring	Replace
4	Improper throttle valve clearance	Adjust
5	Excessive thrust clearance of the camshaft	Adjust

## Section 4 Overheating of the Petrol Engine

<b>No.</b>	<b>Trouble Phenomenon and Cause</b>	<b>Troubleshooting</b>
1	Improper spark plug clearance or carbon deposit	Clean or adjust
2	Loose intake manifold, clogged exhaust pipe	Tighten or clean
3	Insufficient tension of generator belt	Adjust
4	Insufficient coolant or clogged water pipe	Replenish or clean
5	Improper clearance of water pump or damaged	Repair or replace
6	Insufficient engine oil	Replenish
7	Oil line clogging or damaged engine oil pump	Clean or replace
8	Damaged cylinder gasket	Replace
9	Slipped clutch	Repair or replace
10	Radiator clogged by scale	Clean or replace

## Section 5 Excessive Engine Oil Consumption

<b>No.</b>	<b>Trouble Phenomenon and Cause</b>	<b>Troubleshooting</b>
1	Worn or damaged throttle valve oil seal	Replace
2	Worn or damaged oil ring	Replace
3	Piston ring is not staggered as required	Adjust
4	Damaged cylinder gasket	Replace
5	Worn throttle valve and throttle valve conduit	Replace
6	Excessive heat of the petrol engine, inner pressure increase, some lubrication oil exhausted along with ventilating hole.	Check related parts and remove

## Section 6 Difficult Gearshift of the Transmission

<b>No.</b>	<b>Trouble Phenomenon and Cause</b>	<b>Troubleshooting</b>
1	Worn synchronous gear	Replace
<b>No.</b>	<b>Trouble Phenomenon and Cause</b>	<b>Troubleshooting</b>
2	Worn synchronous gear	Replace
3	Damaged fixed ball	Replace
4	Deformed shift fork or uneven wear	Repair or replace

## Section 7 Noise inside the Clutch

<b>No.</b>	<b>Trouble Phenomenon and Cause</b>	<b>Troubleshooting</b>
1	Worn or damaged release bearing	Replace
2	Worn front output shaft bearing	Replace
3	Loose clutch hub	Repair
4	Cracked clutch pressure plate	Replace
5	Loose pressure plate and diaphragm spring	Repair or replace
6	Oil immersed in clutch friction lining	Clean or replace
7	Broken damping spring of the clutch	Replace

# **Chapter 6 Sealing-up and Unsealing of the Petrol Engine**

## **Section 1 Safekeeping of the Petrol Engine**

1. Empty out all coolant in the radiator, cylinder body and water pump.
2. Wipe out the surface with cleaning gasoline.
3. When the petrol engine is warm, the piston is between the upper and lower limit, screw out the spark plug of every cylinder, fill about 10~15g of No. 217 antirust oil into the cylinder, and run for 3-5 circles, then screw in the spark plug and cover the exhaust pipe as specified torque.
4. Pack or seal the throttle valve intake, intake & outlet of the petrol engine and tachometer bushing with paraffin paper.
5. Place the petrol engine inside the packing case.

## **Section 2 Unsealing of the Petrol Engine**

1. Remove exterior grease of the petrol engine.
2. Screw out the spark plug, race the petrol engine, empty out the antirust inside the cylinder as much as possible.
3. Replenish engine oil.
4. Replenish coolant.
5. Unseal every sealing hole.