

**OPPAMA**

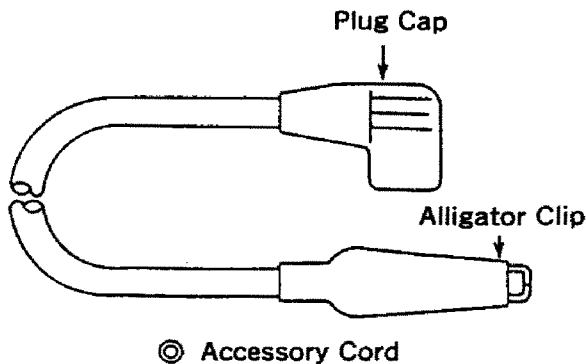
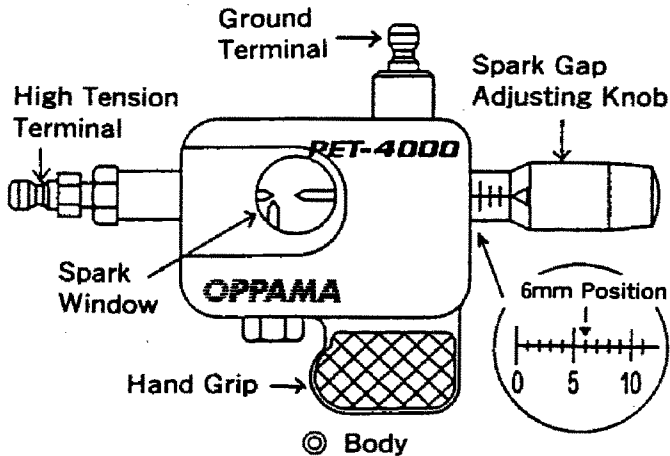
**INSTRUCTION MANUAL**

**PULSE  
IGNITION CHECKER  
PET-4000**

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● **NAME OF PARTS**



● **FUNCTIONS**

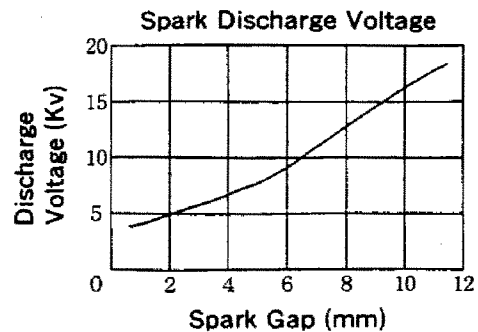
The PET-4000 PULSE IGNITION CHECKER checks and diagnoses any problem in the ignition system of a gasoline engine.

It allows easy diagnosis of potential problems without removing the magneto removed from the engine.

● **TROUBLE SHOOTING OF ENGINE BY CHECKING SPARK**

SPARK CONDITION	TROUBLE	CAUSE OF TROUBLE	REMEDY
Strong spark appears	Spark plug	No trouble with magneto, but spark plug may be defective	C & R
Spark appears but very weak	Ignition coil or trigger coil	Breakage of insulation or short circuit in coil	R
	Contact breaker	Dirty or worn contact points	C & R
		Incorrect point gap	C & R
		Worm cam follower	R
	Play between arm and shaft	R	
Condenser	Broken insulation	R	
No spark at all	Magneto	Demagnetized	R
	Wiring	Defective key switch	C & R
		Defective stop switch	C & R
	Ignition coil Breaker-less ignition	Breakage insulation or short circuit in coil	R
		Defective internal circuit	R
	Contact breaker	No contact point gap	C
		Contact point came off	R
		Dirty contact points or any foreign material came in	C
Condenser	Short circuit or open circuit	R	

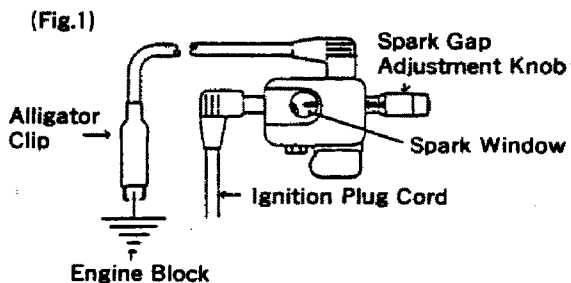
C = Correct, R = Replace



## ● HOW TO USE

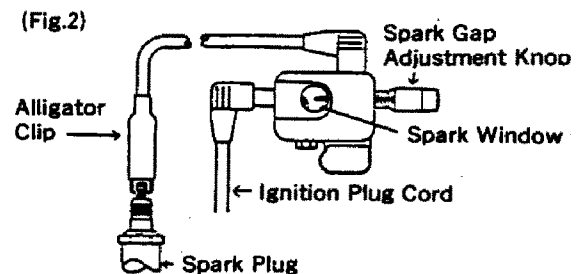
(1) When the ground terminal is connected to the engine body (Fig.1):

1. Turn the spark gap adjusting knob on the PET-400 and set the spark gap to the position that matches the engine (since the required voltage varies according to the various engines, as a general rule, set it normally to 6mm).
2. Connect one of the spark plug caps of the engine to the high tension terminal on the unit, connect the plug cap of the accessory cord to the ground terminal on the unit, and connect the alligator clip to the engine body.
3. Crank the engine by actuating the starter and evaluate the performance of the ignition system according to the condition of the spark that can be seen through the spark window.



(2) When the ground terminal is connected to the spark plug on the engine (Fig.2):

1. Turn the spark gap adjusting knob on the unit and set the spark gap to the position that matches the engine (since the required voltage varies according to the various engines, as a general rule, set it normally to 6mm).
2. Connect one of the spark plug caps of the engine to the high tension terminal on the unit, connect the plug cap of the accessory cord to the ground terminal on the unit, and connect the alligator clip to one of the spark plugs.
3. Crank the engine by actuating the starter (Be careful! When the ignition system works all right, the engine will run as soon as the starter is actuated) and evaluate the performance of the ignition system according to the condition of the spark that can be seen through the spark window.



### CAUTION

1. Never operate the ignition checker when any hazard of igniting any fuel, gas, etc., is foreseen.
2. As a high voltage is applied during the test, be sure for your fingers or any part of your body to be away by more than one centimeter from the spark window, the high tension terminal, the ground terminal and the alligator clip.
3. When the ground terminal is connected to the spark on the engine, if the ignition system works all right the engine will run as soon as the starter is actuated. So be sure to check there will be no hazard around the engine, before the starter is actuated.
4. Never operate this ignition checker with wet hands.
5. Never set the spark gap unnecessarily wider than the required gap as a high voltage may cause damage to the ignition coil.
6. Never screw in the spark gap adjusting knob beyond its end, as it may result in damaging the electrodes.
7. When the alligator clip is connected to a cylinder fin, etc., avoid an operation for a long time, as the heat from the engine may burn the vinyl cover of the clip.
8. Never allow to use this checker for any child, or any adult who is not instructed how to use it.