SP-SPARK PLUGS

SP	AA	OOO
ELECTRICAL SECTION	**BRAND OR DESCRIPTION**	**PART NUMBER**

NGK

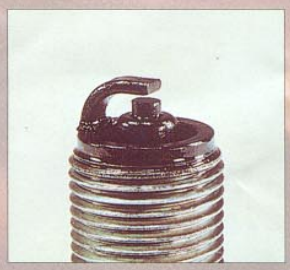
FIRING END ANALYSIS

NORMAL
Insulator nose has slight deposits. Colour ranges from brown to greyish-white. Spark plug is functioning correctly under good engine conditions.

INSULATOR BREAKAGE
The insulator nose is cracked or split. Breakage not resulting from mechanical impact is caused by sudden heating or cooling (thermal shock). Severe detonation will often produce the type of breakage shown in the picture. Causes of detonation are similar to what is described in "Overheated".

CARBON FOULED
Dry, soft, black carbon deposits form in large quantities on the insulator nose and electrodes. As carbon accumulates the insulation between the centre and ground electrodes deteriorates, an electrical leakage path is formed by the carbon and misfire results.
Causes of carbon fouling include; rich fuel mixture, clogged air filter, faulty choke system, prolonged low speed driving or idling, faulty ignition system, over-retarded ignition timing and spark plug heat rating is too cold.

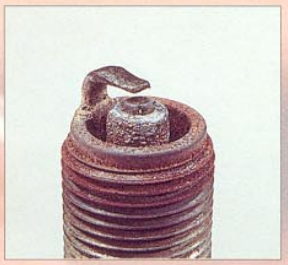
MELTED
The centre and/or ground electrode surface is uneven and cauliflower-like in appearance. The insulator is blistered and possibly contains metallic deposits. Melted firing end results from overheating. Refer to "Overheated" for causes.



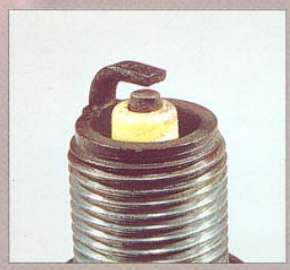
OIL FOULED
Wet, black, oily, carbon deposits form on the insulator nose and electrodes. As described in "Carbon Fouled", misfire results due to the reduction in insulation resistance between centre and ground electrodes.
Causes of oil fouling include; excessive oil entering into combustion chamber, oil level is too high, worn piston rings, cylinders and valve guides.

ABNORMAL EROSION
The centre and/or ground electrodes are badly worn relative to the length of operation. Misfire will eventually result due to the high ignition voltage needed for the large gap. Abnormal erosion is often caused by harsh lead and oil additives combined with severe operating conditions such as high speed driving.

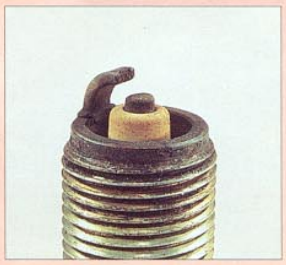
DEPOSITS (Ash Formation)
Heavy ash deposits build-up on the firing end and eventually cause misfire. In some circumstances these deposits can reach temperatures which might lead to pre-ignition. Ash formation is mainly produced from the burning of oil, type of oil, fuel additives and engine condition.



RAPID ABNORMAL EROSION
The centre and/or ground electrodes are very badly worn. Their surfaces are fretted and rough. The electrodes have oxidized and sometimes turn green when the oxidation is heavy. Rapid abnormal erosion is produced by a more aggressive operating environment than "Abnormal Erosion". Refer "Abnormal Erosion" for causes.



LEAD FOULED
Lead fouling usually appears as yellowish brown deposits on the insulator nose. The lead deposits have no adverse effect on starting, idling or low speed driving but do cause misfire during rapid acceleration or under heavy engine load. Misfire results when the lead deposits become electrically conductive at high temperatures creating a reduction in the insulation resistance between centre and ground electrodes. The lead additives used to enhance the fuel octane rating are the source of lead deposits. Lead fouling will not occur with unleaded fuel.



LEAD EROSION
The ground electrode is badly worn and appears to be chipped. Lead erosion is caused by the harsh lead additives in the fuel. At high temperatures these additives chemically react with the nickel alloy electrodes and separate the grain boundary of the nickel alloy.

OVERHEATED
Overheated spark plugs have a white glazed or glossy insulator. Small black deposits accumulate on the insulator nose and the electrodes are prematurely worn.
Causes of overheating include; over-advanced ignition timing, lean fuel mixture, insufficient fuel octane rating, excessive deposits accumulated in combustion chamber, manifold air leak, insufficient cooling and lubricating, spark plug heat rating is too hot.

NORMAL WEAR
The centre and/or ground electrodes are worn. Deposits cover the insulator nose and ground electrode. This plug has operated under normal conditions for a considerable period and reached the end of its life. Further useage will cause misfire, bad fuel economy and poor engine performance.

SPARK PLUGS

NGK SPARK PLUGS

IRITOP 7	Part Number	SP021A
IRITOP 8	Part Number	SP022
IRITOP 9	Part Number	SP003IRITO9

IRIDIUM NGK SPARK PLUGS
[suitable for COMER S/W 80]

BR8HIX	Part Number	SP001D1
	[same as original]	
BPR7HIX	Part Number	SP001C1
	[protrusion tip type]	
BPR8HIX	Part Number	SP001D
	[protrusion tip type]	

NGK RACING SPARK PLUG

B8EGV	Part Number	SP002
B8.5EGV	Part Number	SP002A
B9EGV	Part Number	SP003
B9.5EGV	Part Number	SP004
B10EGV	Part Number	SP005
B10.5EGV	Part Number	SP005A
B11EGV	Part Number	SP005B

DENSO IRIDIUM RACING SPARK PLUGS

IW27	Part Number	SP005N
IW29	Part Number	SP005M
IW31	Part Number	SP006

SPARK PLUG CAPS & LEADS

NON RESISTOR NGK CAP
part number SP011

5 ohm RESISTOR CAP
same as ROTAX & YAMAHA
part number SP012

5 ohm RESISTOR CAP
same as LATE YAMAHA
part number SP013

NGK LEAD REPAIR KIT
[includes lead and 5ohm resistor cap]
part number EPY639

LEAD JOINER KIT
part number EPY639A

part number

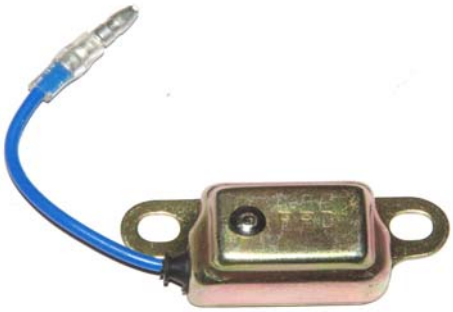
SMALL PVL
[NON RESISTOR TYPE]
part number SP014A

R/R
[NON RESISTOR TYPE]
part number SP014AR/R

YAMAHA KT100S TCI & SUPPORT BRACKET

BILLIT ALLOY BRACKET [GOLD]
EPY638G

BILLIT ALLOY BRACKET [BLACK]
EPY638H



PRD/ATOM NON GENUINE TCI
EPY638A

GENUINE YAMAHA TCI
EPY638

PVL COILS , STATORS and ROTORS
ANALOG IGNITION SYSTEM

PVL COIL PRIMARY BULLIT PLUG LEAD
EPGC041

PVL COIL PRIMARY SPADE TERMINALS
EPGC0412

STATOR WITH 90mm SPIGOT
EPGC0412PVL90

STATOR WITH 94mm SPIGOT
EPGC0412PVL

ROTOR with SMALL TAPER
EPGC043PVLS12MM

ROTOR with LARGER TAPER
EPGC043PVLR15MM