BOYER BRANSDEN IGNITIONS
180 DEG. FIRING CRANK TRIGGERED DIGITAL IGNITION SYSTEM.

WARNING
TURN OFF BEFORE WORKING ON THIS SYSTEM.
THIS WILL AVOID ELECTRIC SHOCKS AND POSSIBLE DAMAGE TO THE ELECTRONICS.

TRIGGER 15% to 175 amperes.
The trigger to reluctor gap should be 0.5 to 1.0mm. (Not critical.)

RELUCTOR PLATE SHOULD BE 3mm THICK OR MORE AND 50mm IN DIAMETER.
FULL RETARD AT CRANKING SPEED CAN BE CONTROLLED BY THE LENGTH OF THE RELUCTOR.
AT FULL RETARD, THE BACK END OF THE RELUCTOR WILL LINE UP WITH THE START OF THE TRIGGER FACE.
FRONT POINT AT FULL ADVANCE IS THE LEADING EDGE OF THE RELUCTOR.
FOR TWO STROKE SYSTEMS, FULL ADVANCE WILL BE AT 5000 RPM RETARDING BACK AS PER THE PROGRAMMED DATA IN THE SYSTEM. SEE TIMING CURVE FOR DATA.
THE CHASSIS AND ENGINE MUST BE CONNECTED TO THE BATTERY NEGATIVE AT ALL TIMES. 5000 OHMS RESISTANCE PLUG CAPS MUST BE USED.
CRANK TRIGGERED IGNITION RELUCTOR DATA
180 DEGREE FIRING

RELUCTOR UNIT ( NOT SUPPLIED)

MILD STEEL
3mm THICK MINIMUM

CRANKSHAFT

TRAILING EDGE
ANTICLOCKWISE RELUCTOR BAR.

1) THE RELUCTOR PASSING THE CENTRE OF THE TRIGGER COIL MUST BE MILD STEEL, OR SOFT IRON, 3mm OR MORE THICK, AND THE STEP MUST BE AT LEAST 5mm HIGH.

2) THE ROTATING MASS BETWEEN THE TRIGGER AND CRANKSHAFT MUST NOT HAVE ANY LARGE LUMPS OR INDETS OF A MAGNETIC MATERIAL, AS THESE COULD GIVE FALSE IGNITION PULSES AT HIGH RPM.

3) THE RELUCTOR CAN FORM PART OF A DRIVE PULLEY OR SPROCKET, BUT CHECK THAT NO BOLT HEADS ROTATE CLOSE TO THE TRIGGER UNIT.

TIMING INFORMATION

THE LEADING EDGE OF THE RELUCTOR WILL LINE UP WITH THE CENTRE OF THE TRIGGER AT THE MOST ADVANCED IGNITION TIMING REQUIRED.

B.T.D.C.

ANGLE

T.D.C.

R.P.M.

BELOW 500 R.P.M.

BELOW 500 R.P.M. THE IGNITION TIMING IS CONTROLLED BY THE TRAILING EDGE OF THE RELUCTOR TO THE FRONT EDGE OF THE TRIGGER, i.e. (THE LONGER THE RELUCTOR THE MORE RETARDED THE TIMING AT STARTING SPEEDS.)

Therefore if the reluctor was 30 deg length (A to B) with the leading edge at the centre of the trigger at 35 deg. B.T.D.C. the most advanced timing would be 35 deg., and at cranking speed approximately firing at T.D.C.