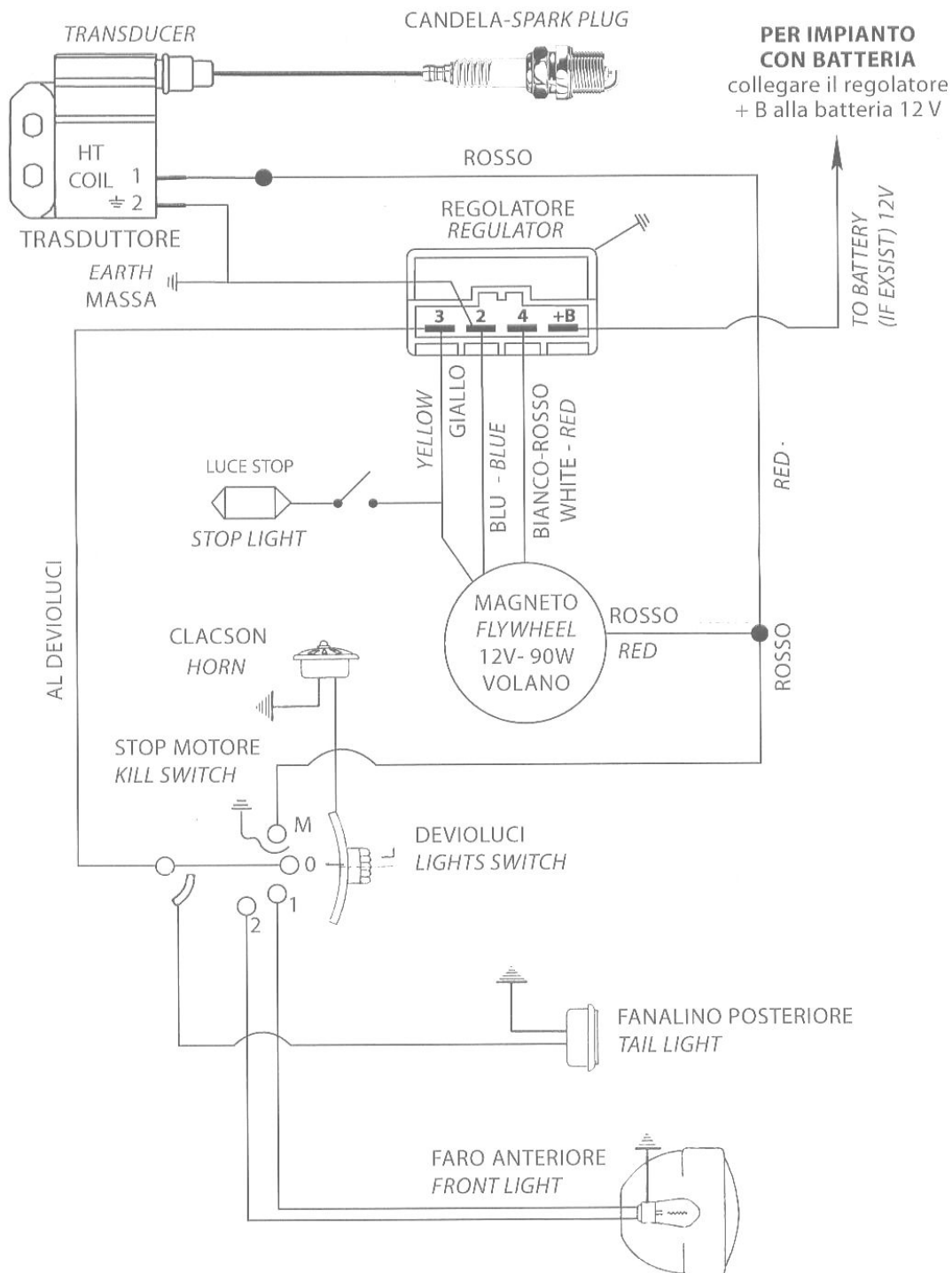


ROTAX 125-175-250-347



**1. GENERAL SPECIFICATIONS**

1.1 NAME : FLYWHEEL MAGNETO  
 1.2 OUR PART NO. : 560033

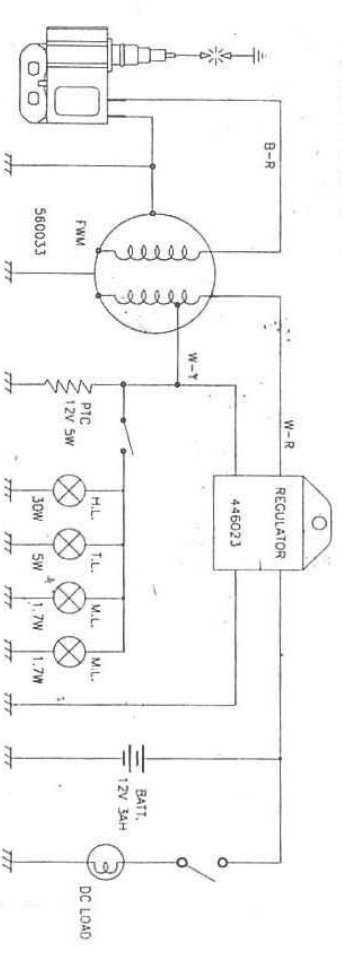
**2. MECHANICAL SPECIFICATIONS**

2.0 DIRECTION OF ROTATION : CLOCKWISE (VIEWED FROM SMALLER TAPER SIDE)  
 2.1 RANGE OF REVOLUTION : 500 rpm 9000 rpm  
 2.2 GUARANTEED REVOLUTIONS : THE DEFORMATION OF OUTSIDE DIAMETER MUST BE 0.05 MAX UNDER 14000 rpm TEST FOR 3 MINUTES BY STATIC BALANCE 10 g cm OR LESS  
 2.3 LIMIT OF UNBALANCE : 12 Kg cm<sup>2</sup>  
 2.4 MOMENT OF INERTIA : 1.160 Kg  
 2.5 TOTAL WEIGHT : 0.360 Kg  
 STATOR : 0.800 Kg  
 ROTOR : 0.800 Kg  
 2.6 AIR GAP : BETWEEN STATOR AND ROTOR 0.45 mm MIN  
 2.7 SURFACE TREATMENT : YELLOW ELECTROPLATED COATING OF ZINC  
 (T<sub>min</sub> GUARANTEED = 150° C)

**3. ELECTRICAL SPECIFICATIONS**

3.0 IGNITION METHOD : CDIG SYSTEM (THYRISTOR)  
 3.1 NUMBER OF SPARKS : 2 SPARKS PER REVOLUTION AT 180°  
 3.2 CDI SYSTEM PART NO. : 512014

**4. ACTUAL CIRCUIT**

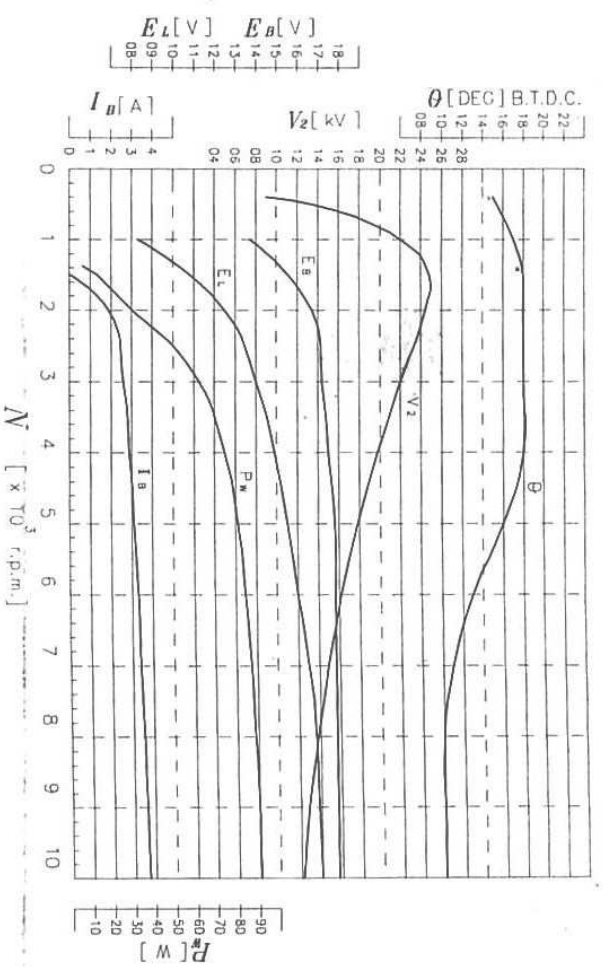


UNIT & COIL ASSY 512014  
 IMPORTANT: GROUND WIRE FROM FLYWHEEL (BLUE WIRE) MUST GO DIRECTLY TO THE C.D.I. UNIT  
 RESISTANCE VALUE OF COILS (AT 20 ° C)

MEASURING PLACE	RESISTANCE VALUE (OHM)
B-R/EARTH	254 ±20 %
W-Y/EARTH	0.4 ±20%
W-R/EARTH	0.6 ±20%

**HANDLING PRECAUTIONS FOR FLYWHEEL**

1. NO USE OF HAMMER WHEN MOUNTING OR REMOVING FROM THE ENGINE.
2. USE ONLY THE SPECIFIED PULLER WHEN REMOVING FROM THE ENGINE.
3. EVERY KIND OF IMPACT MUST NEVER BE APPLIED. THE FERRITE SEGMENTS MAY BE DAMAGED.



**MEANING OF MARKS**

- P.W. : SUPPLIED POWER
- N : IGNITION TIMING (ANGLE OF KEYWAY CENTER VS. MOUNTING CENTER OF STATOR)
- V.S. : SECONDARY VOLTAGE 50PF LOADED
- E.L. : LIGHTING VOLTAGE (NO REGULATION, FULL BATTERY)
- E.B. : CHARGING VOLTAGE (NO REGULATION, NIGHT CIRCUIT)
- I.B. : CHARGING CURRENT

NOTE: THE CORE OF THE STATOR MUST BE AT EARTH POTENTIAL WITH THE ENGINE.

H.L.: HEAD LAMP  
 T.L.: TAIL LAMP  
 M.L.: METER LAMP

# 12V 90W

## GENERAL SPECIFICATIONS

Name: Flywell Magneto

## MECHANICAL SPECIFICATIONS

Direction of rotation: Counterclockwise (viewed smaller taper side)  
 Range of revolution: 500 rpm ~ 12000 rpm  
 Guaranteed Revolutions: The deformation of outside diameter must be 0.05 max under 14000 rpm  
 Test for 3 minutes  
 By static balance <10 g cm or less  
 Limit of imbalance: 12 Kg cm<sup>2</sup>  
 Moment of inertia: 12/70 kg  
 Total weight: Stator 0.470 kg, Rotor 0.800 kg  
 Air Gap: Between stator and rotor 0.55 mm Min  
 Surface treatment: Yellow electroplated coating of zinc (1min guaranteed = 150° C)

## ELECTRICAL SPECIFICATIONS

Ignition method: C.D. Ignition system (Thyristor)  
 Number of sparks: 2 sparks per revolution at 180°

## MEANING OF SYMBOL

- Supplied power
- ∅ Ignition timing before top lead dead center
- N r.p.m.
- V<sub>o</sub> Secondary voltage 50PF loaded

NOTE: The core of the stator must be at earth potential with the engine

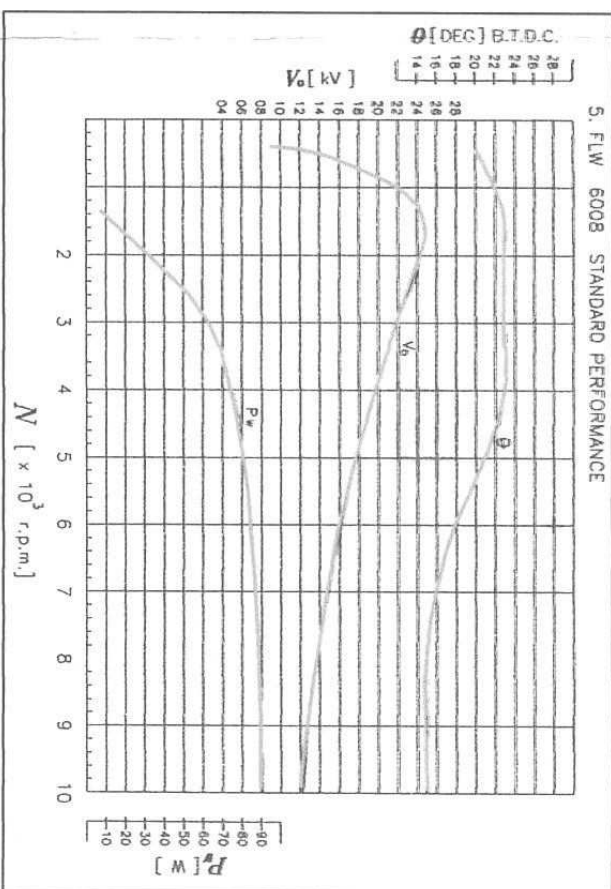
## RESISTANCE VALUES OF COILS (AT 20°C)

Measuring place	Resistance value (ohm)
GREEN/EARTH	290 ±20%
YELLOW/EARTH	0.4 ±20%

## HANDLING PRECAUTIONS FOR FLYWHEEL

1. No use of hammer when mounting or removing from the engine
2. Use only the specified puller when removing from the engine
3. Every kind of impact must never be applied; the ferrite segments may be damaged.

FLW 6008 STANDARD PERFORMANCE



## SPECIFICATIONS

- Storage temperature: -30 ~ +80°C
- Operating temperature: -10 ~ +80°C
- Allowable temperature: SCR (AC) Junction Max +125°  
SCR (DC) Junction Max +125°  
Condenser surface Max +105°  
(AC) Max 9 Aave  
(DC) Max 5 Aave
- Maximum regulate current

## ELECTRICAL CHARACTERISTICS

- Regulate voltage (AC) 12.7 ±0.5 Vrms (Battery full night circuit, 5000 rpm Ta=25°C  
Temp. coefficient max ±8mV/°C  
(DC) 14.5 ±0.5 Vrms (Battery full day circuit, 5000 rpm Ta=25°C  
Temp. coefficient max ±12mV/°C
- Regulate voltage

Leak current: Max 0.1 mA  
 Insulating resistance: Min 50MΩ

## RELIABILITY

- Satisfy with the electrical characteristics each reliability testing
- Mechanical shock 980m/s<sup>2</sup> (100G), Shocked two times in each of X, Y and Z directions.
- Temperature cycling 100 cycles each consisting of +100°C 1 hour and -20°C 1 hour in atmosphere
- Vibration 196 m/s<sup>2</sup> (20G), 50 to 500 Hz/15 minutes log sweep for 4 hours in each of X, Y and Z directions
- Operate acceleration AC 5 Aave, DC 3Aave, 500 cycles each consisting of 30 min. ON/30 min OFF.
- Salt spray 5% salt water immersion 96 hours
- Weight 48 g