

**can-am**

# Warranty Bulletin

**no. 81-1****Date:** 1981 09 11**MODEL:** 125 MX-6**Serial no:** 8044 - All**Subject:** Timing box removal

## PROBLEM:

The ignition timing box may become faulty on some of the above mentioned vehicles.

## REMEDY:

If this situation happens, it is possible to remove the original timing box from the ignition system and readjust the ignition timing.

○ **NOTE:** This modification may change engine power curve.

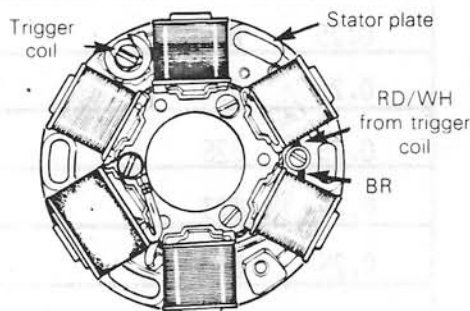
## PROCEDURE:

○ **NOTE:** To perform this procedure, a new flywheel hub (P/N 420 264 435) and a ring terminal (P/N 730 350 001) are needed.

Proceed as follow:

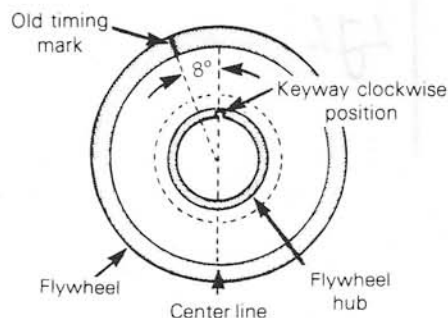
- Remove the R.H. side panel.
- Unplug the C.D.I. connector block at electronic box and the tether cut-out switch wire (black wire).
- Cut the timing box wires (RD/WH - WH - BR) at C.D.I. connector block and remove the timing box (black type).
- Remove the magneto cover ass'y and the flywheel.
- Remove the stator plate ass'y from the magneto cover.

- Cut the RD/WH wire from trigger coil and ground it to the stator plate BR wire using a ring terminal P/N 730 350 001.



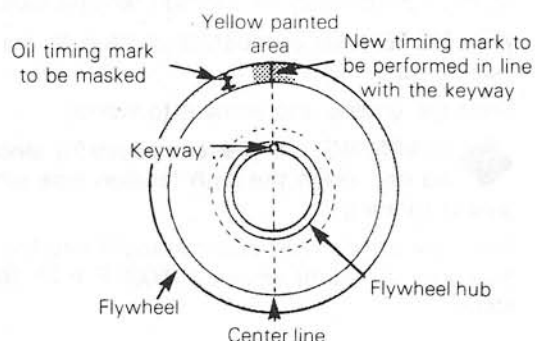
- Position the trigger coil WH wire to the "WHITE" position of the C.D.I. connector block. (Position II).
- Remove the flywheel hub from the flywheel and clean the flywheel surface from Loctite residue.
- Fit the new flywheel hub with its key way positioned approximately eight (8) degrees angle clockwise from the old timing mark.

▼ **CAUTION:** Before assembly apply Loctite 242 (blue) to the flywheel hub mating surface.



▼ **CAUTION:** It is of the utmost importance to replace the old flywheel hub by the new one otherwise damage to engine will occur.

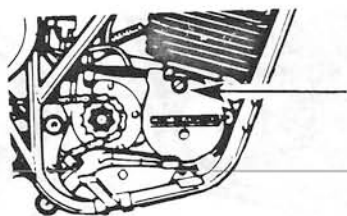
- Secure the new flywheel hub with the eight (8) screws. Torque to 6 N•m (4 ft-lbs).
- Make a new flywheel mark on the flywheel in line with the key way.
- Mask the old timing mark and apply yellow paint to the new timing mark area.



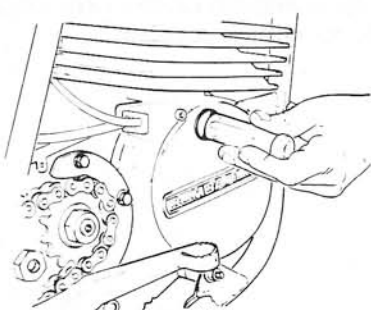
- Reinstall the flywheel, apply Loctite 242 (blue) to the retaining nut and torque to 80 N•m (60 ft-lbs).
- Reinstall the stator plate ass'y to the magneto cover.
- Reinstall the magneto cover ass'y. Torque the retaining screws to: 8 N•m (6 ft-lbs).
- Reinstall the R.H. side panel.
- Proceed with "Timing mark verification" & "Timing procedure".

## TIMING MARK VERIFICATION

Disconnect spark plug wire and remove spark plug.  
Remove the inspection plug on the magneto cover.

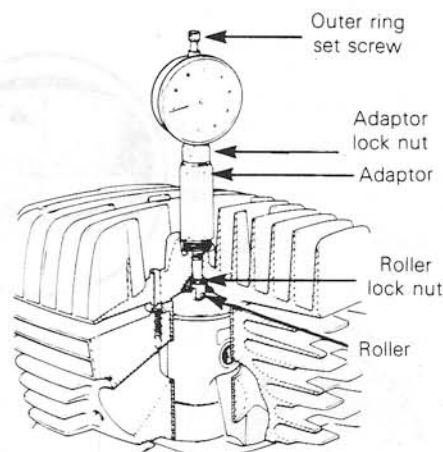


○ **NOTE:** For screwing or unscrewing the plug use the screwdriver grip end, provided with motorcycle tool kit.



Install and adjust T.D.C. gauge (dial indicator) on engine as follows:

- Engage the transmission in the highest gear.
- Rotate the rear wheel until the piston is just before top dead center.
- With gauge in adaptor, adjust roller parallel with dial face. Tighten roller lock nut.

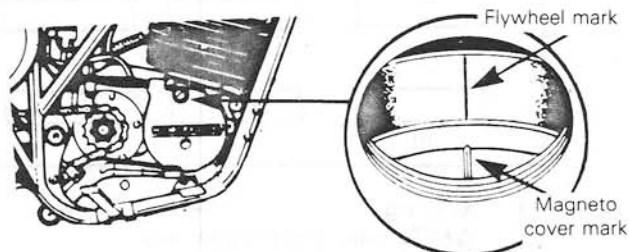


- Loosen adaptor lock nut then holding gauge with dial face toward magneto. Screw adaptor in spark plug hole.
- Slide gauge far enough into adaptor to obtain a reading then finger tighten adaptor lock nut.
- Rotate the rear wheel until the piston is at top dead center.
- Unlock the outer ring of the dial and turn it until "O" on the dial aligns with the pointer.
- Lock the outer ring in position.

Rotate the rear wheel **counter-clockwise** and slightly go beyond the specified distance before top dead center then gently rotate **clockwise** until the specified distance before top dead center is reached  $1.2 \pm 0.2$  mm ( $0.047 \pm .008$ ").

○ **NOTE:** Turning clockwise to achieve setting will take up all free-play and ensure an accurate reading.

Look through the inspection hole to see if the flywheel and magneto cover marks align.

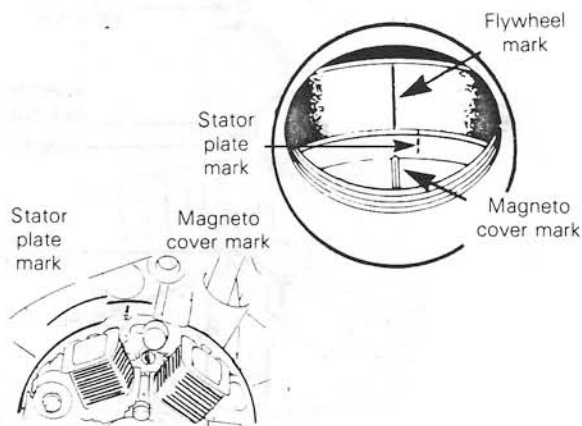


If the marks do not align, scribe a new mark on the **magneto cover** in line with the **flywheel mark** at the specified piston position (B.T.D.C.).

**CAUTION:** Timing mark verification cannot be used as a timing procedure, therefore always check the timing (using a stroboscopic timing light) at 5,000 R.P.M. after the marks have been aligned.

See "Timing Procedure".

The stator plate is also marked.



The stator plate mark is used only to ease the **preliminary** timing adjustment, by matching **stator plate mark** and **magneto cover mark**, when parts are re-assembled. Also, this mark may be used, when performing timing with a stroboscopic timing lamp. To determine the approximate distance the stator plate should be rotated (retard or advance) using magneto cover mark as a reference.

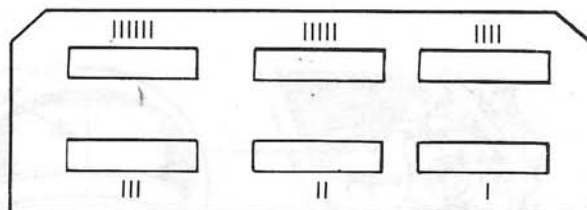
Prior to timing procedure, ensure to clearly identify the timing marks.

**CAUTION:** Only the magneto cover marks and the flywheel mark must be matched to obtain proper timing.

- Connect the tether cut-out switch wire.
- Connect the C.D.I. connector block to the electronic box.

## WIRES POSITION:

**CAUTION:** Ensure the wires at C.D.I. connector block are positioned as follows:



- I Nothing
- II WHITE wire from trigger coil
- III BLACK wire from tether cut-out switch

- IIII RED wire from magneto
- IIII Nothing
- IIII BROWN wire from magneto (stator ground)

## TIMING PROCEDURE

### (STROBOSCOPIC TIMING LAMP)

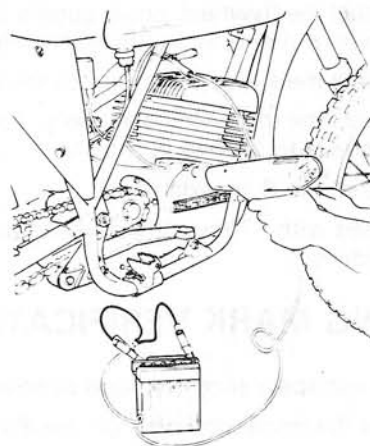
Remove the timing inspection plug, and connect the timing light pick-up to the high tension lead.

**NOTE:** Use a separate battery to supply timing lamp.

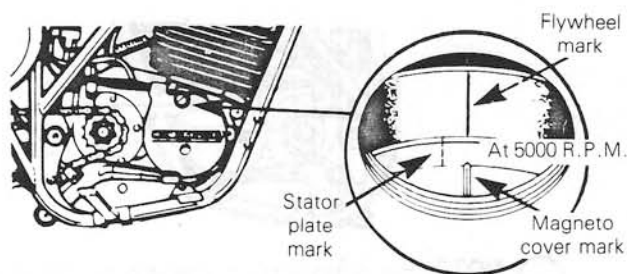
Start the engine and allow it to warm.

**WARNING:** To prevent powerful electric shock, do not touch the high tension wire while the engine is running.

Point the timing light beam straight into the inspection hole and, revving the engine to 5000 R.P.M. for a brief instant.



Check the timing mark alignment. If timing is correct, the **magneto cover mark** and **flywheel mark** will align as shown. Stop the engine.

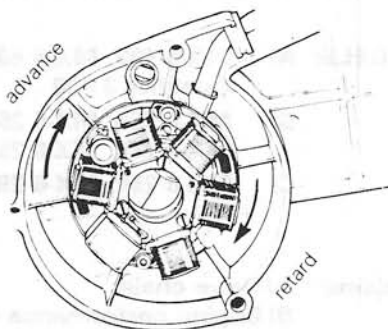


**CAUTION:** Prior to timing procedure, ensure that the timing marks have been checked with a dial indicator for perfect accuracy.

If timing was incorrect.

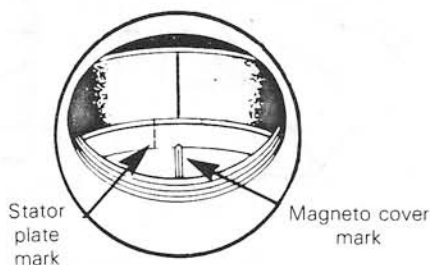
Remove the magneto cover.

Loosen the stator retaining screws then move the stator plate in the advance or retard direction to correct the misalignment.



60W Magneto  
(6 poles)

○ **NOTE:** To determine the amount of rotation given to the stator plate, use the stator plate mark with the magneto cover mark as a reference point.



Tighten the stator plate screws.

▼ **CAUTION:** Ensure to apply "Loctite 242" blue (medium strength) to the retaining screws and torque to 4-5 N•m (3-4 ft-lbs).

Install the magneto cover, start the engine and recheck the alignment of the timing marks on the flywheel and magneto cover.

Repeat this procedure until the timing marks on the flywheel and magneto cover are perfectly aligned at 5000 R.P.M.

○ **NOTE:** Only stroboscopic timing lights utilizing capacitor or inductive pick-up can be used to indicate correct spark setting without disturbing the electronic equilibrium of the ignition circuit.

Examples of suitable timing lights:

SUN PTL 45

Snap-on MT 215 B

Bosch EFAW 169 A

Marquette 41-220

▼ **CAUTION:** Only the **magneto cover mark** and the **flywheel mark** must be matched to obtain proper timing.

## WARRANTY

You will be credited for one (1) flywheel hub (P/N 420 264 435) **NO** labour, **NO** handling.

Parts and claim **must** be returned to the distributor.

This offer expires - September 1st, 1982.

Order required parts through the regular channel.

Required parts:

- Flywheel hub (P/N 420 264 435)
- Ring terminal (P/N 730 350 001)