HINTS AND TIPS ON
SERVICE
For BSA Dealers

from BSA Incorporated, 639 Passaic Avenue, Nutley, N. J.

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1967 - IMPROVEMENT AVAILABLE FOR 1966
LIGHTNING - MARK II - THUNDERBOLT
AND ROYAL STAR MODELS.

SUBJECT: IGNITION SYSTEM IMPROVEMENT - NEW 160°DWELL IGNITION CAM

This new Ignition Cam has been designed to eliminate a secondary spark condition which causes "pinging" and excessive cylinder head temperature.

Overheating of the engine and piston seizues can be prevented by assembling this new Ignition Cam on 1966 - A50 and A65 Models, (except the Hornet which is equipped with the Energy Transfer Ignition System.)

We urge you to assemble this new Ignition Cam which is a part of the Auto Advance Unit on all New 1966 Lightning - Mark II - Thunderbolt and Royal Star Models you have in Stock, as well as the 1966 machines of the same Models that are brought in your shop for service.

Part Required: One (1) Part No. 19-1824 Auto Advance Unit. Order your requirements on a standard BSA PARTS ORDER BLANK.

The original Auto Advance Unit may be returned for credit. You must send us a new Warranty Claim Tag Form No. S-5 filled in completely including the Invoice Number on which you received the replacement Auto Advance Unit, covering each machine you convert.

The Auto Advance Units you have in stock Part No. 19-8122 may be sent to us for exchange.

This Replacement and Exchange Parts Service is Free. Do not delay in taking advantage of this program today. There is no labor allowance for this conversion on 1966 Models. The cost of doing the job will be worth your while.

Instructions for Assembling the Auto Advance Unit with the new 160°Dwell Cam are attached.

Walter Brown

WB/jw
Encl.

WALTER BROWN
Service Manager

INSTRUCTION SHEET

IGNITION SYSTEM IMPROVEMENT:

It has been determined that some piston seizures have been caused by pre-ignition due to a secondary spark condition. A brand new contact breaker cam has been designed to eliminate this condition, and we are enclosing a new factory-set automatic advance and retard assembly which includes this cam. Follow the instructions below in installing this new assembly.

CHANGE OVER TO NEW 160° DWELL DISTRIBUTOR CAM, ON ALL 12 VOLT A50/A65 MODELS EXCEPT HORNET.

REMOVAL

1. Remove both spark plugs.

2. Remove both round inspection covers (a) one in primary case which exposes the new timing marks for the use of a timing light and (b) the other in the timing or right side of engine, which exposes the point plate and auto advance unit.

3. Remove crankshaft timing plug cover in front of engine. Turn engine over to compression stroke on right cylinder. Insert timing plug into crankcase and turn engine forward slowly until plug drops into crankshaft slot.

   NOTE: 34° position of plug is with the flat edge toward the top.

4. Remove right footrest, kick starter, gear change lever and outer timing cover.

5. Remove point plate, complete and pull off auto advance unit, using puller No. 61-5005.

INSTALLATION

1. Slide new 160° dwell auto advance unit in to drive, install center bolt, do not tighten as yet.

2. Install point plate complete, note bottom set of points controls left cylinder and top set of points controls right cylinder.

3. Press the auto advance inwards and trigger the rotating outer cam anti-clockwise to a full advanced position with the upper set of points just opening. Check with ohm meter.

4. Secure advance with center bolt.

Continued . . . . .

INSTRUCTION SHEET

INSTALLATION Continued.

5. Replace spark plugs.

6. Remove timing plug and reinstall cover.

7. Connect timing light to a separate battery and right spark plug and start engine. Direct the light on to the crankshaft rotor when, if timing is correct, the mark on the rotor and the pointer will line-up when the engine revs 3,000 RPM's.

8. If the timing mark and pointer do not line up, correct by altering point plate for right cylinder and point setting only for left cylinder. (.015" minimum point setting.) To advance timing rotate plate clockwise. To retard timing rotate plate counter-clockwise.

NOTE: You must check and reset timing twice in the first 1,000 miles and at least once every 1,000 miles thereafter.

If these instructions have been closely followed and all adjustments accurately made, the ignition timing will be correct.

Timing on both cylinders must be at 34° to insure good performance and to avoid mechanical damage. (You make certain of this by using the strobe light.)

If you do not own a strobe light - - by all means purchase one and learn its proper use - - for without it you cannot time an engine accurately.