

# The TRIUMPH Corporation

## SERVICE BULLETIN

July 1, 1966

66/4

TO ALL EASTERN TRIUMPH DEALERS:

SUBJECT: Electrical Problems - 1966 Models With Lucas Ignition Switch #31899 and Diode #49345.

PROBLEM: Faulty ignition - 1966 battery ignition twin models (except 6T Thunderbird).

SYMPTOM: Engine mis-fires.

CAUSE: Loose connections at ignition switch where the "Lucar" terminals are riveted to the switch.

To check this, unplug wires at ignition switch, remove switch from panel and make sure that both the "L" shape terminal and the "U" shape terminal are tightly riveted to the switch. If a loose connection exists, the switch must be replaced.

CURE: Remove Lock Assembly #F6981 from the switch and fit a new switch. Return defective switch with a claim tag if motorcycle is within the 90 day guarantee period.

To remove lock, turn the key to the "ON" position. Then insert a nail or a pin punch thru the small hole in the die cast body and by pressing inward against the spring loaded pin inside the switch, and at the same time pulling on the key, the lock unit can then be withdrawn from the switch.

NOTE: If the key is lost the lock unit can still be removed by drilling another 3/16" dia. hole in the die cast body directly in line with the top of the key hole. Spring loaded pin can now be depressed to release lock unit.

If you order a replacement key always specify the lock number that is stamped on the lock tumbler.

PROBLEM: Failure of diode #49345 fitted to all 1966 battery ignition models and 1964 and '65 - 6T Thunderbird.

SYMPTOM: 1. Heavy discharge (short circuit) when ignition switch is turned on.  
2. Blown fuse.  
3. Engine mis-fires.

CAUSE: A "shorted" diode will cause a direct connection between the "hot" (negative) side of the battery and ground when ignition switch is turned on. (refer to enclosed 1966 wiring diagram). The ammeter will show full discharge and the fuse will probably blow. With a shorted diode and battery out of the circuit (blown fuse) the engine will mis-fire. By disconnecting the white wire at the diode terminal the mis-fire will be corrected and the engine may sound OK at low speed. Don't be misled by this, however, because serious trouble can result if the motorcycle is run with both the diode and the battery disconnected. The reason for this is that the voltage rises as the engine speed increases. This excessive voltage can cause the ignition coils to fail, the engine to overheat and give the symptom of "bogging down". This could lead to piston seizure.

Cont'd...

July 1, 1966

-2-

66/4

CURE: If you suspect a shorted diode remove it from the heat sink and make this simple test with a low voltage (less than 12 volts) test light. (Burnworth Tester #33 will do) Connect one lead of the test light to the diode terminal and the other to the 1/4" threaded stud. If the light is on, reverse the leads, and the light should not come on. If the light comes on you know the diode is faulty (shorted). A good diode will only show low voltage continuity in one direction. For further information consult your Workshop Manual CD411 Section "H".

If you experience a faulty diode that is fitted to the early black heat sink we suggest replacing the heat sink with the latest type F7237 (this is the bright aluminum with angle shape).

When fitting a new diode always make sure the hex body is mounted against the heat sink and the red ground wire terminal is located on the back of the heat sink under the 1/4" nut.

CAUTION! Diode #49345 can be easily broken if over-tightened. Only 1-1/2 ft/lb. is recommended (17 inch/lb.).

IMPORTANT NOTES: If a diode fails and a replacement is not available unplug the white wire at the diode and tape it so that the terminal will not "short" against the frame or heat sink plate. Make sure that the fuse is not blown and that the battery is properly connected. As long as the battery is properly connected it is OK to operate the motorcycle with the diode disconnected but the battery is likely to be over-charged because the regulating effect of the diode is lost.

To reduce the charging rate of the alternator (to run the motorcycle without the diode) you can unplug the green/yellow wire from the alternator side of the junction block located under the engine. By referring to the enclosed diagram you will note that this operation disconnects two of the alternator coils, thus reducing the out-put by about three amps. If this reduced out-put won't maintain the battery charge you can reconnect the green/yellow wire at any time to increase the charge rate.

In case of a battery failure it can be disconnected and the motorcycle operated satisfactorily without the battery providing the diode is operating OK and the heat sink is adequate to keep the diode from over-heating. (We recommend F7237 heat sink) Refer to Blue Bulletin #16 for further details.

When testing the diode for performance, make sure the battery is in good condition and check D.C. current input to battery by connecting your test set ammeter between the positive terminal of the battery and ground. Maximum current input should be two to three amps at a fast idle. Then disconnect the white wire from the diode terminal and you will note that the current input will increase to six to seven amps. This test indicates that the diode is functioning properly.