The TRIUMPH Corporation

SERVICE BULLETIN

January 24, 1968 68/1

TO ALL EASTERN TRIUMPH DEALERS

SUBJECT: Fitting Lucas 2MC Capacitor to Triumph Motorcycles

When properly installed, the 2MC capacitor will allow use of lighting and/or ignition without battery.

54170009	- Ignition Capacitor 2MC	-	List Price - $5.05A
54483156	- Capacitor Mounting Spring	-	List Price - $1.80A
54953455	- Sub - Harness - to Connect Capacitor	-	List Price - $1.60A

These parts can very conveniently be fitted to 1968 Triumph twins. A capacitor mounting bracket is welded to the underside of battery box. Lucas diagram and instruction sheet No. 2802 is packaged with each capacitor, No. 54170009. The following important points should be noted.

1. Lucas 2MC capacitor is only suitable for use on Zener diode regulated, alternator systems.

2. Front mounted, finned heat sink, No. H2237 should be employed.

3. The capacitor must be positioned with its terminals pointing downward.

4. Capacitor can be ruined if connected wrong. 3/16" Lucar terminal (red point dot) is positive. 1/4" Lucar terminal is negative.

5. Capacitor equipped Triumphs can be run with or without battery. If battery is removed, be certain to insulate negative battery wire from ground. Otherwise capacitor may be ruined.

6. If battery is removed, lights must be switched off to allow engine to be started. On the back of this page is a simplified wiring diagram which can be used for competition Triumphs where you require neither battery or lighting equipment.

Very truly yours,

THE TRIUMPH CORPORATION

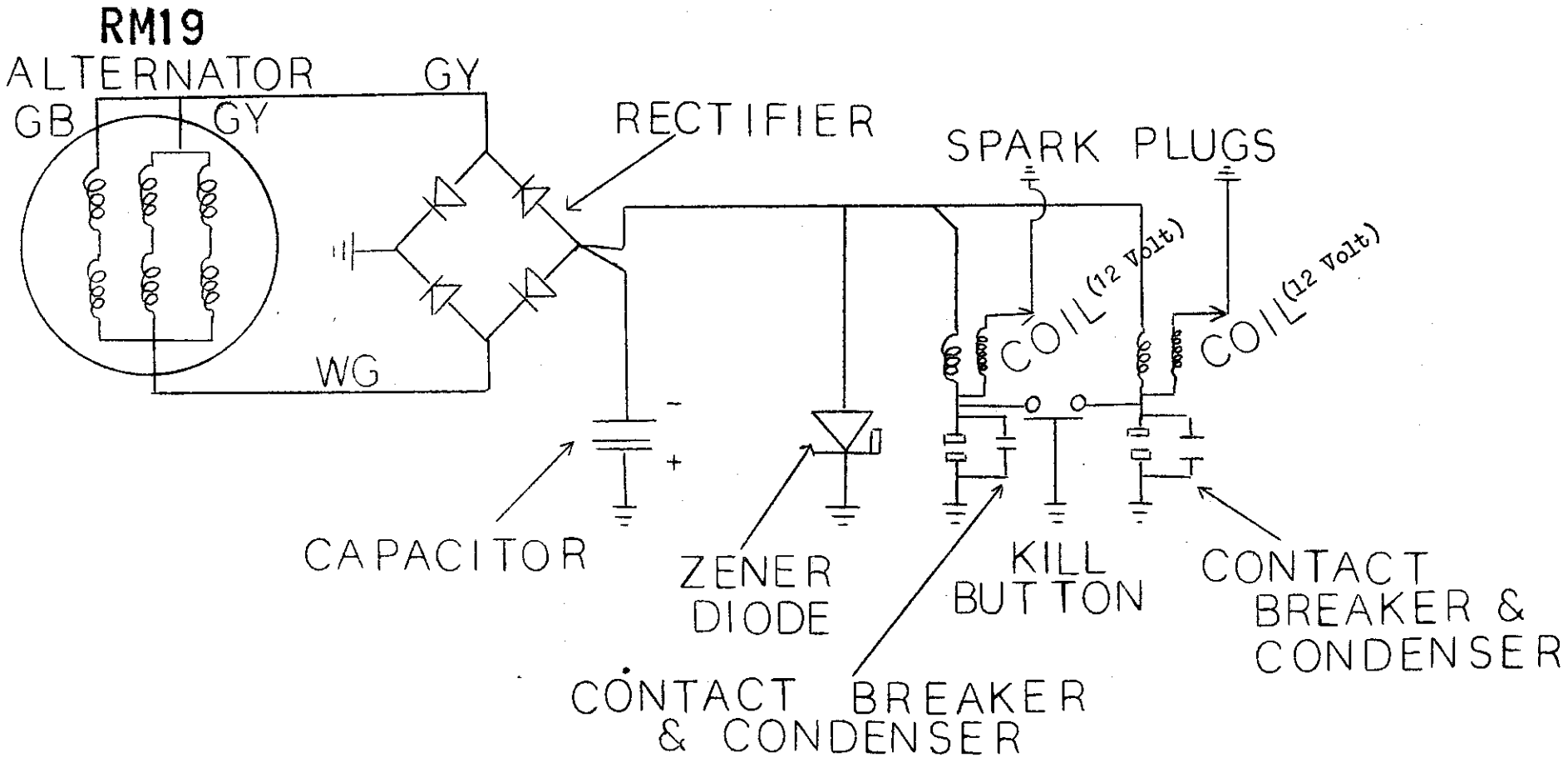
Rod Coates

Service Manager

Rod Coates:bjh

COMPETITION WIRING DIAGRAM WITH CAPACITOR

FOR "B" & "C" RANGES



LUCAS

LUCAS ELECTRICAL SERVICES, INC.
501 W. 42nd St., New York, N.Y. 10036

LUCAS/GIRLING/C.A.V.
SERVICE
INFORMATION

Parent Company
JOSEPH LUCAS LTD.
Birmingham 19, England

MOTORCYCLE CAPACITOR SYSTEM

Object of the System

The new motorcycle capacitor system has been developed to enable the rider to operate the motorcycle with or without a battery. The rider therefore has the choice of normal battery operation or running without a battery if desired - e.g. competing in trials or other competitive events and for emergency operation in case of battery failure. The machine can readily be started without the battery and run as normal, including the use of the headlights. Additional accessories cannot normally be operated or, of course, parking lights, unless the battery is connected.

Components

The system incorporates basically the standard 12-volt battery - coil ignition components with the zener diode regulator on an adequate heat sink plus a spring-mounted, high-capacity electrolytic capacitor of a special shock-resistant type. This is the Lucas model 2MC No. 541 700 09.

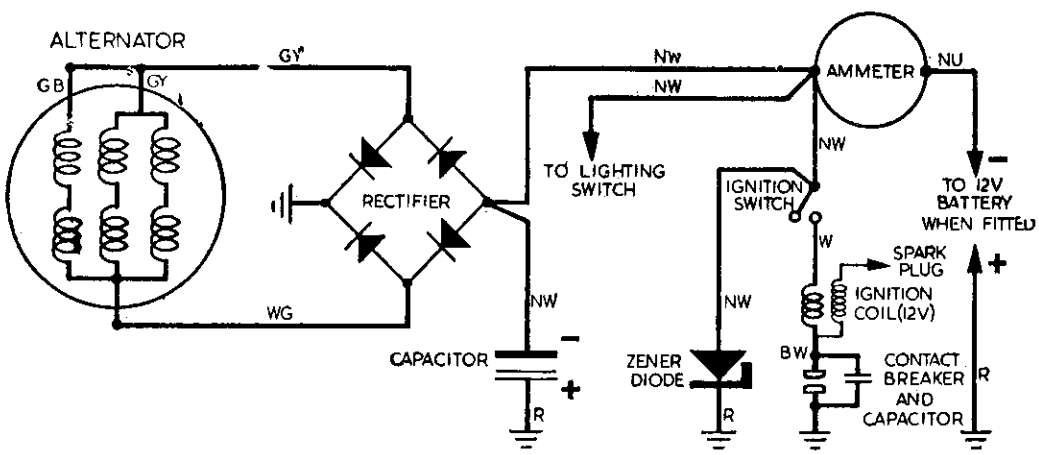
Method of Operation

The capacitor stores the energy pulses from the alternator, which insures sufficient current flowing through the ignition coil at the moment of contact opening, thus producing an adequate spark for starting. When running, the capacitor helps to reduce the voltage ripple from the alternator. This system has an advantage over the a.c. ignition system of considerably less critical alternator magnetic timing. Providing the centers of the rotor and stator poles are roughly in line in the fully retarded position, satisfactory starting will be obtained. Furthermore, any auto-advance angle and speed characteristics may be used and perfect running ignition performance achieved.

Continued . . . . .

Wiring and Installation

It is most important that the zener diode is mounted on an adequate heat sink. This must be a minimum 6 x 6 x 1/8" aluminum, with the diode centrally mounted and the whole assembly in the clear air stream. The alternator should be connected to give full output (i.e. Green/Yellow and Green/Black leads joined together). The capacitor negative terminal and zener diode must both be connected to the rectifier output (center terminal) or other convenient connection on the Brown/White lead. (not to ignition coils as normal practice). The small (positive) capacitor terminal is connected to ground. The capacitor should be mounted in its spring with the terminals downwards.



The TRIUMPH Corporation

Parts - Tools - Accessories Bulletin

January 25, 1968 68-1P

SUBJECT: New Tools

CD523 Contact Breaker Puller

Subject tool replaces D484T and can be used to remove C/B shaft/action plate from all Triumph twins, 1963 thru 1968. Do not use D484T for 1968 models or you will damage the auto-advance assembly.

CD491 Crankshaft Locating Tool

Subject tool replaces all previous tools used to locate crankshaft for timing purposes.

Use tapered end of pin for "C" Range models from engine number H50000 (3/16" dia. holes in flywheel).

Use plain end of pin for all "B" Range models and earlier "C" Range, (1/4" slot in flywheel).

We are sending one each of these tools to each Triumph Dealer.

Very truly yours,

THE TRIUMPH CORPORATION

S. E. Lovell

Parts Manager

S. E. Lovell:bjh

A-Cub
B-65/0
C-500

The TRIUMPH Corporation

Parts - Tools - Accessories Bulletin

February 7, 1968 Bulletin #68-2P

SUBJECT: Part Number Changes

In order to bring their part numbers in line with those used by British industry, it has been necessary for Triumph Engineering to change the part numbers for their Unified nuts and bolts. Please correct your parts catalogues and price list in accordance with these changes, and transfer your stock of these parts to the new part numbers. To accomplish this changeover in the easiest manner, we suggest you completely correct one catalogue at a time starting with the 4B, then the 5B, then the 7C, and finally the 8C.

Old Number	New Number	Description	Catalog and Range	Year	Page	Ref. No.
11104/04/2	14-0101/001	Bolt	5B	1967	65	21
"	"	Bolt	5B	1967	81	13
"	"	Bolt	8C	1967	85	13
11104/06/2	14-0103/001	Bolt	4B	1966	71	24
"	"	Bolt	4B	1966	75	11
"	"	Bolt	4B	1966	95	31
"	"	Bolt	5B	1967	61	24
"	"	Bolt	5B	1967	65	12
"	"	Bolt	5B	1967	83	34
"	"	Bolt	7C	1966	67	11
"	"	Bolt	7C	1966	71	24
"	"	Bolt	7C	1966	83	31
"	"	Bolt	8C	1967	63	11
"	"	Bolt	8C	1967	67	24
"	"	Bolt	8C	1967	79	34
11105/04/2	S1822	Bolt	5B	1967	61	37
"	"	Bolt	5B	1967	67	38
11105/06/2	14-0114/001	Bolt	8C	1967	45	4
11105/08/2	14-0116/001	Bolt	8C	1967	45	10
13104/00/2	14-0301/001	Nut	4B	1966	75	5
"	"	Nut	5B	1967	63	5
"	"	Nut	5B	1967	65	5
"	"	Nut	7C	1966	67	5
"	"	Nut	8C	1967	63	5
"	"	Nut	8C	1967	69	5
13105/00/2	14-0302/001	Nut	8C	1967	47	34
13206/00/1	14-0403/001	Nut	4B	1966	39	18
"	"	Nut	5B	1967	35	18
"	"	Nut	7C	1966	37	18
"	"	Nut	8C	1967	39	18

Continued on reverse.....

Old Number	New Number	Description	Catalog and Range	Year	Page	Ref. No.
13206/00/2	14-0403/001	Nut	8C	1967	47	50
13208/00/2	14-0405/001	Nut	8C	1967	47	46
15104/00/2	14-0701/001	Self-locking nut	4B	1966	71	25
"	"	Self-locking nut	4B	1966	75	6
"	"	Self-locking nut	4B	1966	95	34
"	"	Self-locking nut	5B	1967	61	25
"	"	Self-locking nut	5B	1967	65	6
"	"	Self-locking nut	5B	1967	83	37
"	"	Self-locking nut	7C	1966	67	6
"	"	Self-locking nut	7C	1966	71	25
"	"	Self-locking nut	7C	1966	83	34
"	"	Self-locking nut	8C	1967	63	6
"	"	Self-locking nut	8C	1967	67	25
"	"	Self-locking nut	8C	1967	79	37
15105/00/2	14-0702/001	Self-locking nut	8C	1967	21	14
"	"	Self-locking nut	8C	1967	45	6
15106/00/2	14-0703/001	Self-locking nut	5B	1967	39	13
"	"	Self-locking nut	8C	1967	47	21

LM:ib

The TRIUMPH Corporation

Parts - Tools - Accessories Bulletin

February 12, 1968 Bulletin #68-3P

T20 ROLLER BEARING BIG ENDS

New from the factory! Roller bearing big ends for all double ball bearing T20 models, 1962-on. Available both as an assembly with flywheels, and as individual parts. Great for competition and "hard use" street riders. Part numbers and prices as follows:

E7507	Crankshaft assembly	$56.00A
E7509	Roller bearing and cage	$ 3.68A
E7508	Connecting rod	$12.26A
E6539	Crankpin	$ 7.88A

These factory roller bearing big ends are supplied with large diameter shouldered crankpins to insure proper flywheel alignment.

CD464 and CD469 COMBINATION ACCESSORY GROUPS NOW IN STOCK!

Yes! Now in stock for immediate delivery are the fast-moving CD464 and CD469 Combination Accessory Groups. The demand for these highly chromed one piece seat rail, luggage rack, and saddlebag mount combinations has been so great over the past year that we've had a difficult time (to say the least) keeping any in stock. However, the manufacturer has been able to increase production, and we do have good stocks of these Combination Accessory Groups now. So, rush your order in. Order CD469 for 1963-'66 models, and CD464 for 1967-'68 models. The Combination Accessory Groups fit both 650's and 500's, and retail for $28.88F.

Note: To fit the CD464 Combination Accessory Group to 1968 models, it is necessary to raise the new aluminum taillamp adaptor. Some CD464's include a 1/4" spacer for this purpose, however, if you receive one without the spacer, you may simply substitute a number of 1/4" washers for it. The spacer, or washers, should be fitted to the center attaching stud of the adaptor, between it and the rear fender. On some 1966 and 1967 models it may be necessary to replace the standard F5424 rear fender lifting handle with the new F7850 lifting handle in order to fit the Combination Accessory Group.

W2033 DUAL-LEADING SHOE ANCHOR PLATE ASSEMBLY

Now available from the factory as an assembly -- all of the parts necessary to install the new dual-leading shoe front brake in earlier single-leading shoe front wheels! The assembly "bolts up" to all 1966-'67 650's, and all 1968 T100R's. The only additional item required is the new longer D665T front brake cable. The W2033 anchor plate assemblies are on the way to us from the factory now, so order immediately to insure early delivery. The suggested retail price of the assembly is $39.20C.

LM:ib

The TRIUMPH Corporation

Parts - Tools - Accessories Bulletin

March 1, 1968 BULLETIN #68-4P

SUBJECT: Two New Triumph Service Tools

Stanchion Tube Removal and Replacement Tool (Unified Thread)

Part No. DD048/567 List Price $9.60B

We are sending this essential shop tool to every Eastern Triumph Dealer. It should be used when servicing the forks of 1968 650cc models after Engine No. DU68364 and for 500cc models after Engine No. H57083. Beginning with these engine numbers the top threads of the stanchion tubes were changed from the British C.E.I. thread with 26 threads per inch to the new Unified thread with 28 threads per inch.

This new shop tool has TWO NEW FEATURES.

1. The slide hammer is now knurled for easy operation.

2. A separate piece has been added between the slide hammer and the threaded end. This allows you to use the subject tool to remove the stanchion tube and eliminates the need for a special tool similar to the Z19 removal tool that is used to drive the early type stanchion tubes out of the fork assembly.

We will continue to carry in stock the familiar CD475 slide hammer fork tube removal tool which must be used on all earlier model twins with the 26 pitch C.E.I. thread.

Tubular Six Point 1 3/16" Socket Part No. DD056/67 List Price $1.24A

This useful socket is used to remove the front wheel spindle nut when removing the brake plate assembly of the new twin leading shoe front brakes. Order some of these handy wrenches to sell to your customers.

The TRIUMPH Corporation

SERVICE BULLETIN

January 25, 1968 68/2

(This bulletin supersedes 64/3)

TO ALL EASTERN TRIUMPH DEALERS

SUBJECT: Use of CD456 Timing Kit and CD491 Crankshaft Locating Tool.

This bulletin applies to all "B" & "C" Range motorcycles since 1964 with the TDC or 38° BTDC flywheel notch. Accurate ignition timing can be accomplished as follows:

1) Remove both spark plugs and the contact cover.

2) Make sure the auto advance unit works freely - if not, remove, clean and oil it until it does. When reinstalling this unit torque the bolt to 8 lb. ft. MAX. Do Not Overtighten.

3) Clean or replace both contact sets as necessary and align the ground contact so both contacts are parallel.

4) Adjust both gaps (with a clean feeler gauge) to .015". For battery ignition models the gap should be checked just as the contacts are fully open turning engine forward. On A.C. ignition models the contact gap should be set when the rubbing block is on the high point of the ignition cam.

5) Using CD491 tool, locate the crankshaft at TDC or 38° BTDC.

6) Remove the auto advance bolt and washer. Hold the ignition cam fully advanced (all the way clockwise) and install the timing disc adaptor and washer with the advance locking washer cup side in. Tighten the adaptor no tighter than 8 lb. ft. torque.

7) Make an accurate reference point either on a piece of masking tape on the right exhaust pipe, or a stiff pointer attached to the frame or engine.

8) Install the timing disc on the adaptor and clamp it so either T.D.C. or 38° B.T.D.C. is directly opposite your reference point. Double check where the slot or hole in the crankshaft is (TDC or 38° BTDC) and be sure the disc is set at the proper corresponding position.

9) Remove the locating pin from the flywheel. Attach the clip end of a Tri-Cor 233 test light or an equivalent light or ohmmeter to a good clean ground on the engine.

10) Disconnect the B/W and B/Y leads from the coils under the gas tank (A.C. models only) and make sure the leads don't short together or to ground.

11) Rotate the engine in a FORWARD direction (by turning the rear wheel with high gear selected) while holding the other lead of the continuity tester against the contact spring. Note the number of degrees before TDC that the light goes out (the contacts just break) for each set of contacts. It is possible that this figure won't be the same for each cylinder. Rotate the contact plate until both contact sets break at 38° BTDC or as close as possible to 38° BTDC. Always check the timing with the two pillar bolts TIGHT! To ADVANCE the timing rotate the contact plate COUNTERCLOCKWISE. To RETARD the timing rotate the contact plate CLOCKWISE.

Continued.....

Now, to obtain really accurate ignition timing:

1) If you have the earlier contact plate (#425379) or the CD450 contact plate, adjust the point gap so that both cylinders fire at 38° BTDC.

   a) INCREASE the contact gap to ADVANCE the timing.

   b) DECREASE the contact gap to RETARD the timing.

2) If you have the later contact plate (#54419097) with provision for radially indexing each breaker assembly, loosen the two clamping screws for the contact set you need to move and:

   A) Move the breaker assembly COUNTERCLOCKWISE to ADVANCE timing.

   B) Move the breaker assembly CLOCKWISE to RETARD timing.

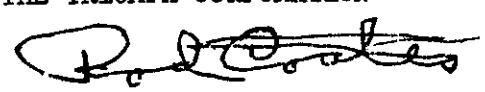
After moving the contact point assembly (1968 model type) it is a good idea to recheck the point gap.

12) Reconnect the B/W, B/Y leads to the coils. (A.C. models). Remove the adaptor and advance locking washer and install the auto advance bolt and washer. Torque this bolt to 8 lb. ft. and check again that the contact breaker cam turns freely. Reinstall the contact cover with a new gasket. Gap the spark plugs (.020") and tighten them to a torque of 25 lb. ft.

Following these suggestions will insure a fast, accurate ignition timing job. Remember that all 12 volt ignition Triumph Models should be fitted with the 160° contact breaker cam, Part No. 54419124.

Very truly yours,

THE TRIUMPH CORPORATION



Service Department

Rod Coates:mm

The TRIUMPH Corporation

SERVICE BULLETIN

February 19, 1968 68/3

TO ALL EASTERN TRIUMPH DEALERS

SUBJECT: "C" Range Pistons, Part Number E6884 and E6897

Standard "C" Range cylinder bore is 69mm (2.716"). When fitting oversize pistons the cylinders should be bored to the following sizes.

Oversize	Cylinder Bore Measurement
+ .010"	2.726"
+ .020"	2.736"
+ .030"	2.746"
+ .040"	2.756"

Always measure replacement pistons before boring and allow .004" clearance measured at the bottom of piston skirt.

If you have experienced piston skirt seizure with the subject pistons, please send us the failed samples and a report of operating conditions. We would like to know if the subject pistons are NOT giving satisfactory performance.

Very truly yours,

THE TRIUMPH CORPORATION

Rod Coates

Service Manager

Rod Coates:mm