



JOSEPH LUCAS NORTH AMERICA INC.
TWO NORTHFIELD PLAZA,
TROY, MICHIGAN 48084

CAV • SIMMS • BRYCE

SERVICE INFORMATION



PARENT COMPANY
JOSEPH LUCAS LTD.
BIRMINGHAM 19, ENGLAND

DATE 11/75	ELECTRICAL SERVICE STATION # 5	JOBBER/DIST # 4	JLNA # 17	M/C DIST #	BLMC # 18
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ACR ALTERNATORS: INBUILT REGULATOR SERVICE PLAN

This service instruction note contains details of inbuilt regulators (8TR, 11TR and 14TR) and their service replacements. Illustrations showing terminal configurations and methods of connecting are also included.

For reference to service replacement regulators and figure numbers, see table below:

PART NO.	TYPE	FIG. NO.	USE NO.
37534	8TR	1	37565
37541	8TR	3	37565
37555	11TR	4	37565
37558	8TR	5	37565
37561	11TR	6	37565
37565	8TRD	2	—
37566	8TRD	14	37565
37579	11TR	16*	37584
37581	14TR	7	37565
37582	14TR	12	—
37583	14TR	19	—
37584	14TR	18*	—
37587	8TRD	8	37612
37590	8TRD	10	37595
37591	8TRD	11	37596
37593	14TR	19	37602
37595	14TR	9	—
37596	14TR	9	—
37599	14TR	17	—
37602	14TR	13	—
37612	14TR	15	—

EXAMPLE: 37581 (Leads connected as Fig. 7) use 37565 (Leads connected as Fig. 2)

NOTE: Where one model is replaced by another, all necessary mounting sundries are supplied.

SURGE PROTECTION

Earlier alternators having no surge protection diode will need to have one fitted to protect the regulator from voltage transients. (See chart page 2)

* See additional note on conversion of 20 ACR alternators from 11TR to 14TR on page 2.

LUCAS/GIRLING/CAV/BRYCE/BUTLERS/SIMMS/ZENITH/STROMBERG

ALTERNATOR MODEL**DIODE PART NO.**

15, 16, 17, 18 ACR
20 ACR

60210096
54048354

REPLACEMENT OF 11TR REGULATORS ON 20ACR ALTERNATORS

Older 20 ACR alternators used an 11TR regulator 37579 connected as diagram 16. you will note that contrary to the arrangement in all other illustrations the green lead of the regulator goes to the brush farthest from the regulator and the yellow lead to the closest.

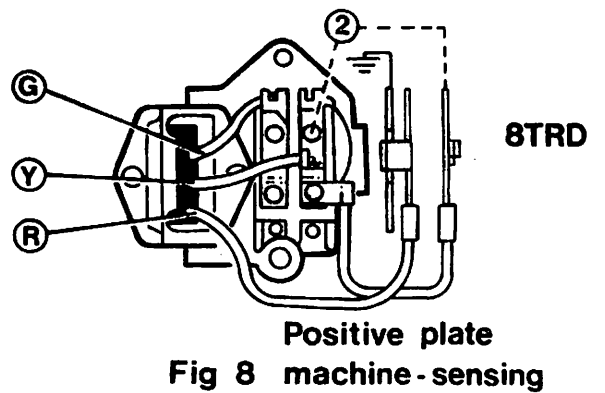
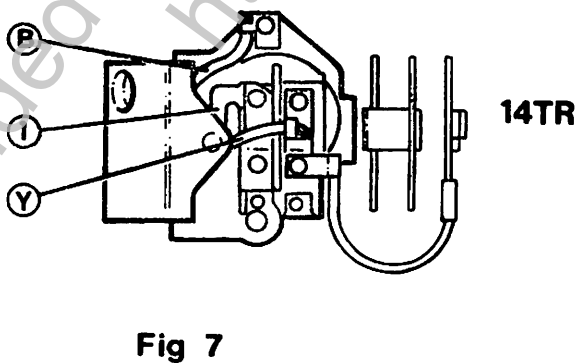
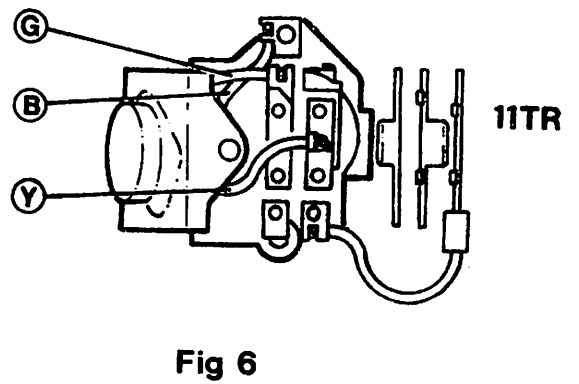
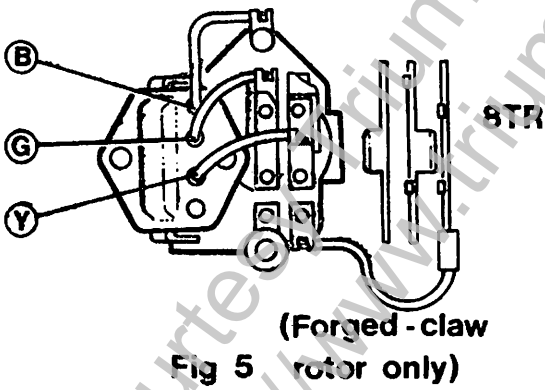
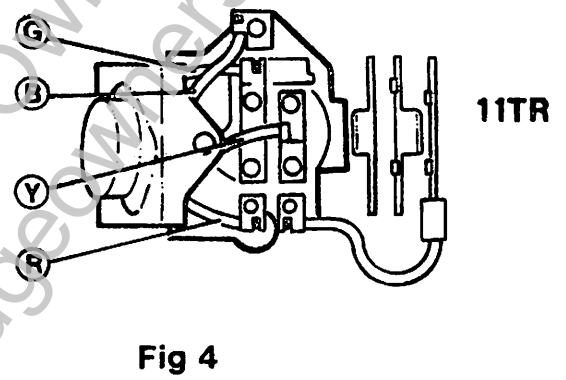
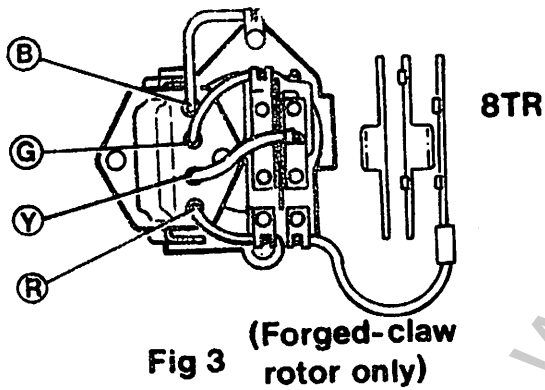
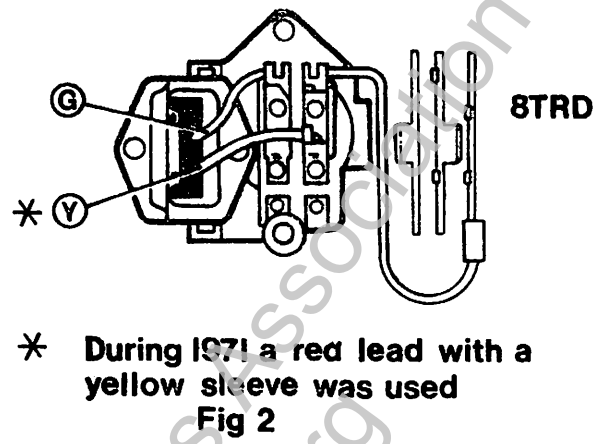
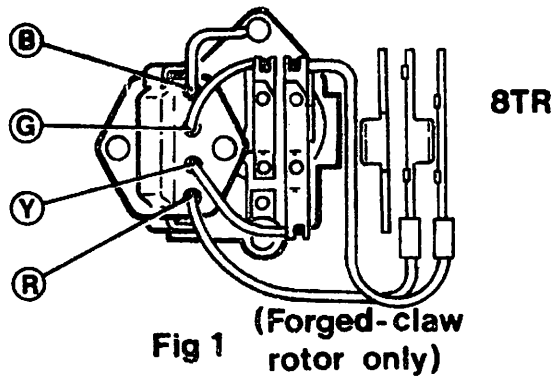
This makes no difference to the operation or testing of the alternator but does cause the orientation of the north and south poles in the rotor to be reversed.

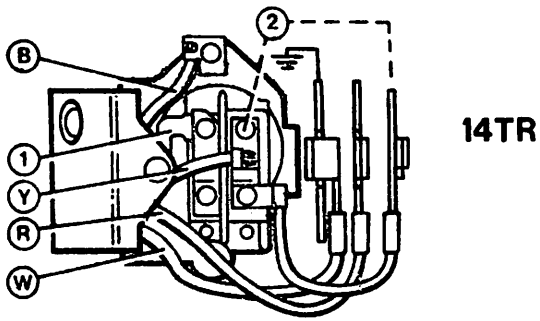
Later 20 ACR alternators used the 14TR regulator 37584 shown in Fig. 18 and you will note that the arrangement of the green and yellow leads has been reversed.

When replacing an 11TR with a 14TR the leads may be changed around as the figure suggests. However, in many instances a phenomena is exhibited in that the excitation current which is supplied to the alternator through the ignition warning lamp bulb and the Ind terminal is now orienting the north and south poles of the rotor field the opposite to that obtained earlier. It so happens that the excitation field may be just equal and opposite to the slight field remaining in the claws of the rotor from its earlier operation, with a result that the alternator will not charge.

There are two ways around this:

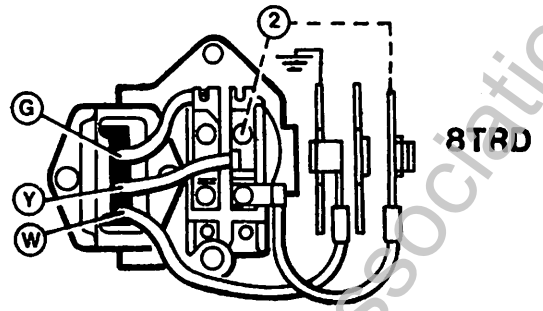
1. With the alternator running, momentarily jump out the warning lamp and put a direct battery feed to the Ind terminal. This will increase the field current and establish the residual magnetism the right way.
- or/ 2. Install the 14TR regulator without the link and instead run a wire from the regulator mounting screw to the brush box farthest from the regulator and put the yellow lead to the one closest to the regulator. This will keep things as they were in Fig. 16





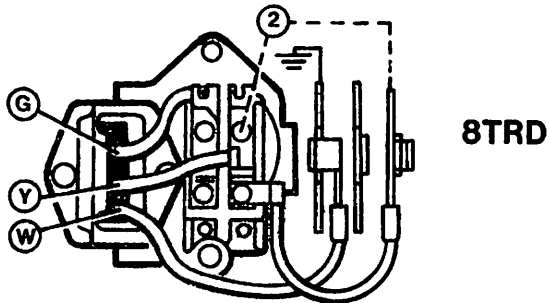
White lead 37595 $\frac{3}{16}$ " Lucar
 White lead 37596 $\frac{1}{4}$ " Lucar

Fig 9



White lead $\frac{3}{16}$ " Lucar

Fig 10



White lead $\frac{1}{4}$ " Lucar

Fig 11

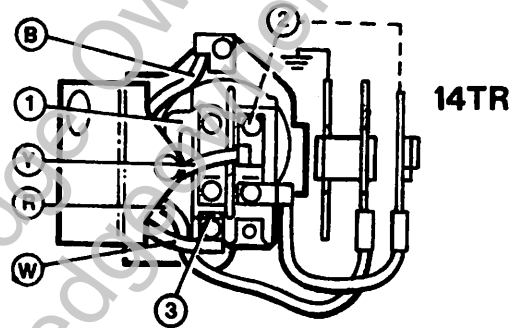
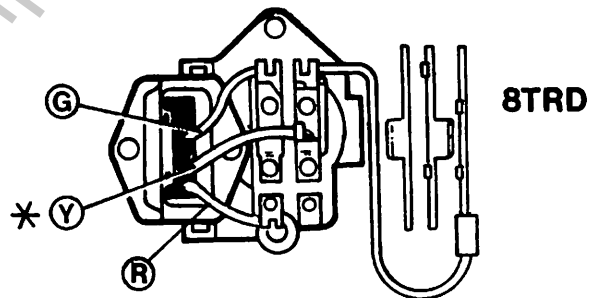
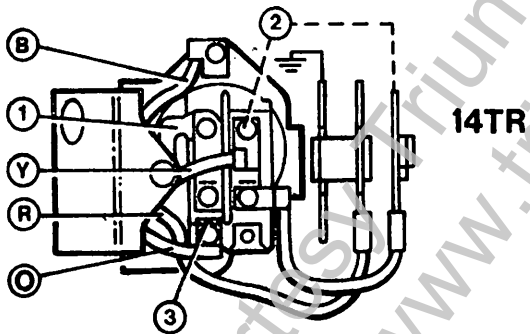


Fig 12



* During 1971 a red lead with a yellow sleeve was used
 Fig 14

Fig 13

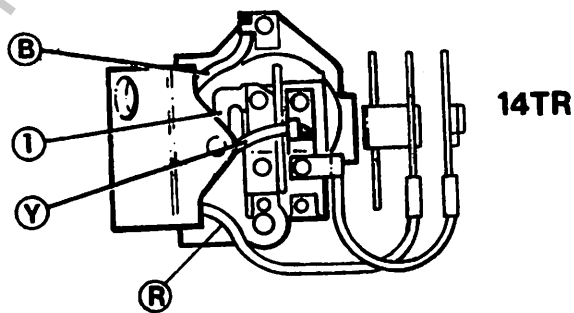
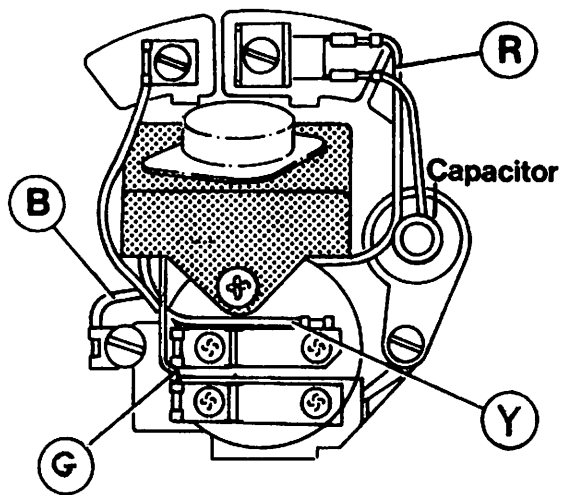
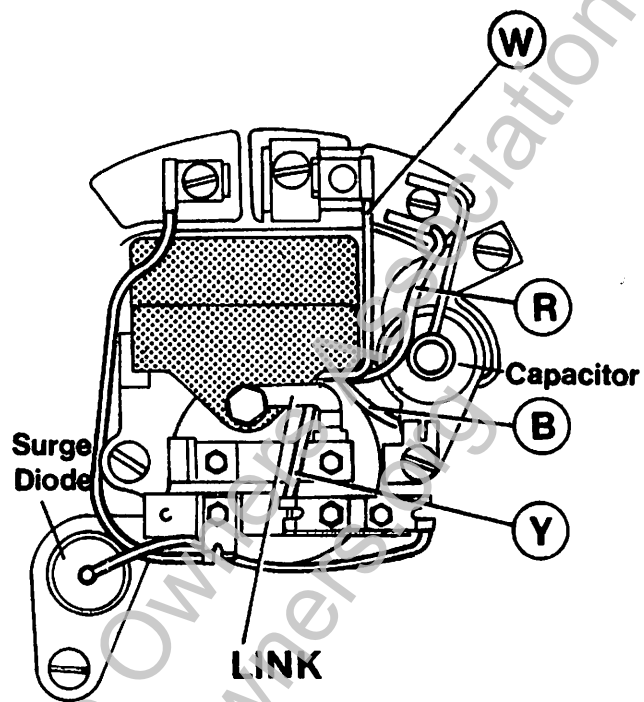


Fig 15



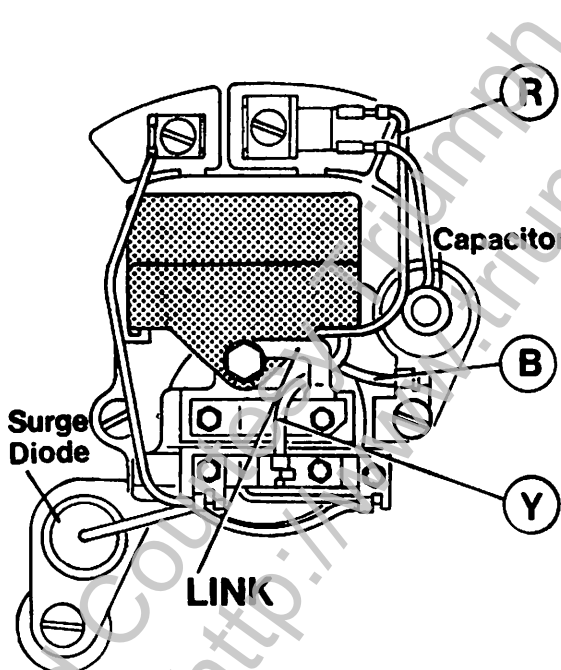
11TR REG

Fig 16



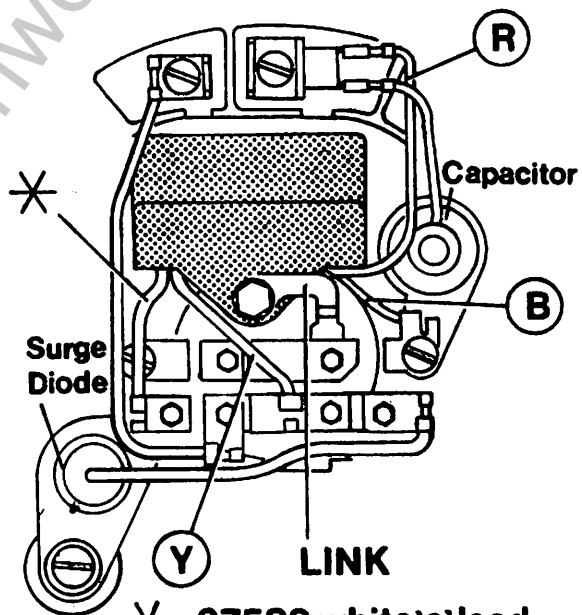
14TR REG

Fig 17



14TR REG

Fig 18



* 37583 white's lead
 * 37593 orange's lead
 14TR REG

Fig 19

Wiring Colour Code: B-Black W-White G-Green R-Red O-Orange
 1 -Metal connector link ('F' Terminal)
 2-Alternative connections for surge protection device
 3-Lucar 'S' terminal

Provided Courtesy Triumph Edge Owners Association
<http://www.triumphedgeowners.org>



Wiring Colour Code: B-Black W-White G-Green R-Red O-Orange
1-Metal connector link (Terminal)
2-Alternative connections for surge protection device
3-Local 2' terminal

Fig 18

Fig 19

Fig 17

Fig 16

Fig 15

Fig 14

Fig 13

Fig 12

Capacitor

Capacitor

Surge
Diode

Surge
Diode

Capacitor

Capacitor

B

B

Y

Y

W

W

R

R

O

O