



The Relay Box of the Telma system requires to be examined in order to make sure that the setting and condition of the contacts remain good and that the function is satisfactory.

Remove the cover to carry out a visual inspection.

Check the cover rubber seal is in good condition.

Apply an airline to remove any grit or foreign bodies trapped between the coil housing plate and the back plate of the moving arm. The contact could remain closed if grit is present.

Check all terminals for security and any evidence of corrosion, especially the main feed positive terminal. Clean or replace if necessary. It is important that the terminal locking nut is secure to prevent the terminal turning.

Check that the earth connection is secure. A poor earth connection will cause damage to the diodes and consequently the contacts will pit due to excessive flashing. Any evidence of severe corrosion of any of the fixed or moving parts of the contacts will require making good by cleaning or in bad cases replacement of the defective components.

Check the function of the moving arm, if sluggish check the following :-

- 1) If the return tension spring (item 25A) appears to be weak, it must be replaced.
- 2) Ensure that the moving arm is not fouling the side of the plastic support. This is applicable to early models JD1..... and JD2..... series only.

Carry out a careful visual check on the contact point faces, which should be reasonably free of carbon and pitting caused through burning.

RELAY BOX CONTACT GAP

2.70mm +/- 0.30mm

Contact points should be kept in a near perfect condition and can be cleaned if necessary with a special spray. **DO NOT FILE OR POLISH.** Should the points be damaged, replace and reset both fixed and moving contacts.

If the points are damaged as a result of arcing, the diodes may be faulty; if damaged, the diode assembly (item 34) must be replaced when replacing the contacts.



On the right hand side of the fixed contact is a fusible link. Check that a fracture has not occurred and the retaining screws are tight; if the fuse is broken, find the cause before replacing.

Replacement Fuse (Pack of 4) VD402730

Carry out a functional check of the relay units themselves by ensuring the battery connection is made and physically closing each relay in turn by hand.

On releasing the contact, a very small instantaneous spark should be observed. Generally the brightness should be comparable throughout. If the spark remains for a significant period after opening the contact, or it is particularly bright, this will indicate a defect in the 'backflash' diode. The diode can be tested with the relay box remaining in the vehicle as follows:

Remove all the cables from the relay box.

Set a digital test meter to the Diode Check function.

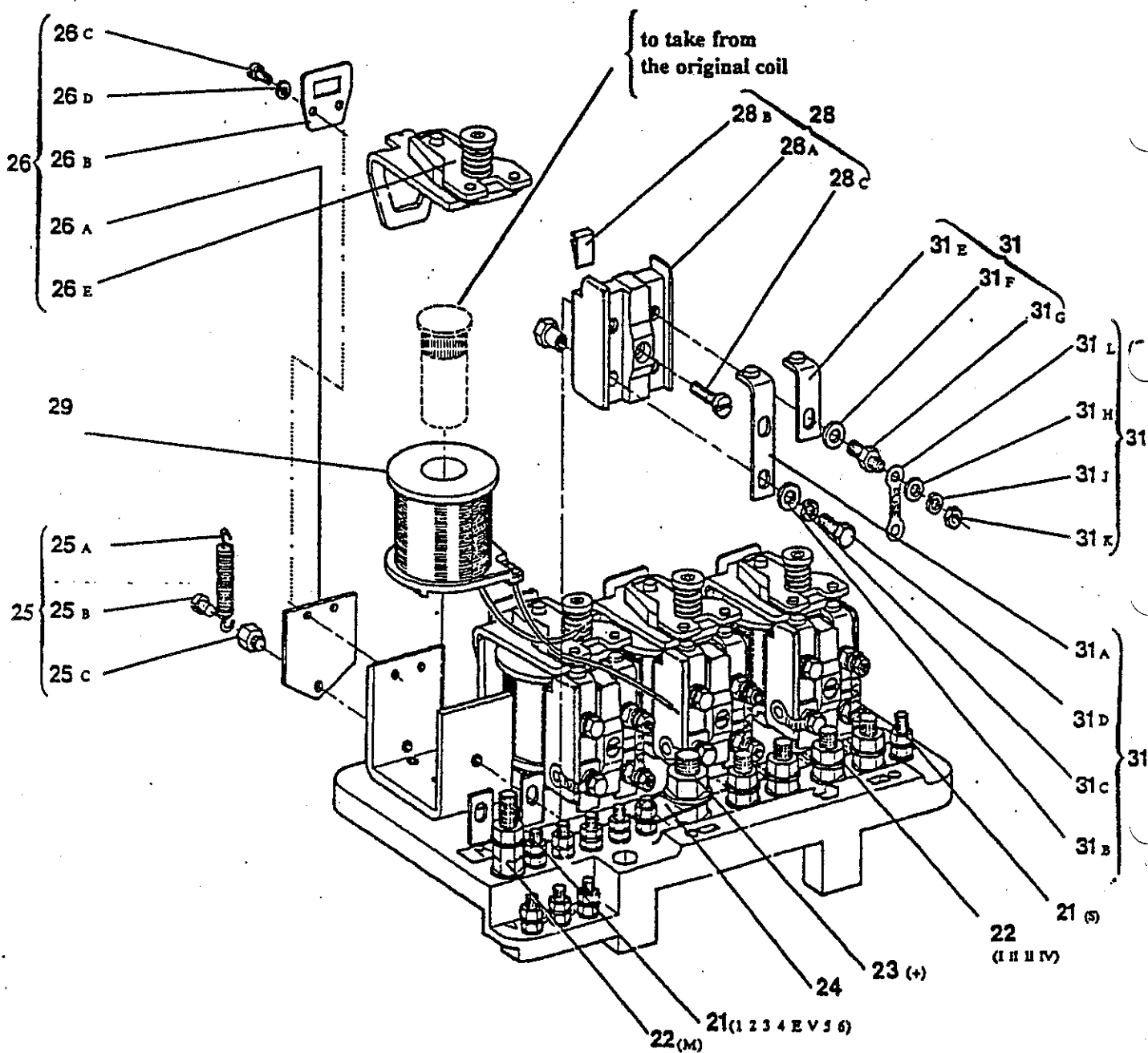
Connect the positive lead of an Ohmmeter to M terminal and the negative lead to each of the 4 Retarder power supply terminals (marked I - IV) in turn. Check that the value is between 500 and 600 Ohms and zero when the leads are reversed.

The stop light diode can be checked with the positive lead to number one Retarder power supply terminal (marked I) and the negative to terminal S; similar readings to the above should occur.

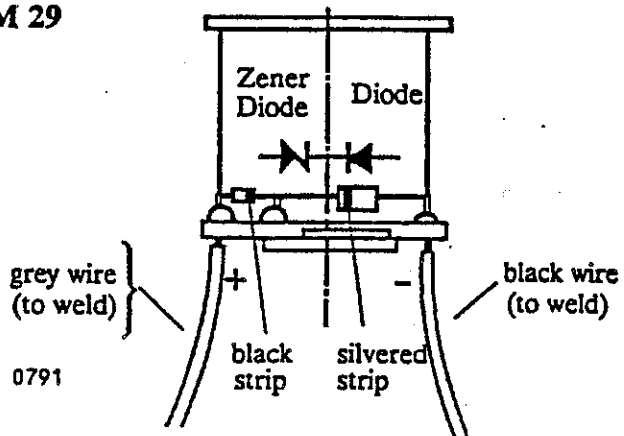
To check stop lights, use a test bulb connected between terminals M and S on the relay box, and close the contacts on relay one.



TELMA RELAY BOX



ITEM 29



Diodes and Zener diodes connection to coil terminal



The adjustment must be made with the relay in the off-position.

The top contacts and moving arm are an assembly (item 26) and cannot be adjusted. The bottom contacts (item 31A & 31E) are individually secured by screws and can be adjusted.

The gaps between the fixed and moving contacts should be the same for all 4 relays. The two contacts on each relay must make contact simultaneously.

RELAY BOX CONTACT GAP

2.70mm +/- 0.30mm

When the contacts are touching, there should be about 0.5mm clearance between the moving contact arm and the coil housing plate. There must be free movement remaining in the compression spring.

CONTACT without FUSE (item 31A)

Loosen the two screws (item 31D) and adjust the long fixed contact (item 31A) to obtain correct clearance between the fixed (item 31A) and the moving (item 26E) contacts.

Tighten the screws (item 31D)

Recheck the clearance between the contacts.

CONTACT with FUSE (item 31E)

Unscrew the nuts (item 31K) and release the washers (items 31H and 31J) and the fuse (item 31L).

Loosen the upper thread stud (item 31G) and adjust the short fixed contact (item 31E) to obtain correct clearance between the fixed (item 31E) and the moving contacts (item 26E)

Tighten the threaded nut (item 31G)

Recheck the clearance between the contacts.

Install the fuse (item 31L), the washers (item 31H and 31J) and tighten nuts (item 31K).