



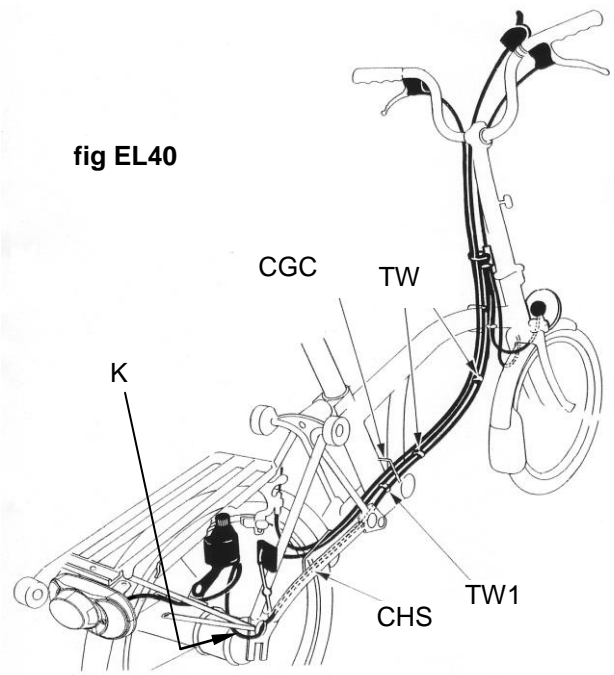
## FITTING DYNAMO WIRING LOOM.

Replacement looms currently have integrated spade connectors, for use with an AXA HR Traction dynamo (or any dynamo with similar 2.8mm x 0.8mm connection terminals). For other types of bottle dynamo, you have to remove these spade connectors, and strip the insulation to leave about 12mm of bare wire.

Also, if for any reason, with a halogen lamp, you have to detach the lens on the front lamp from the bulb holder, remember that you should not touch the glass of the bulb.

Before fitting the new loom take note of the route the wiring loom takes between the dynamo and the lamps, and also which control cable the loom is attached to (and for E-version (no mgds) the routing through the P-clip behind the front fork). Cut the various tiewraps securing the existing loom in place (and for E-version undo the front brake nut to release the P-clip).

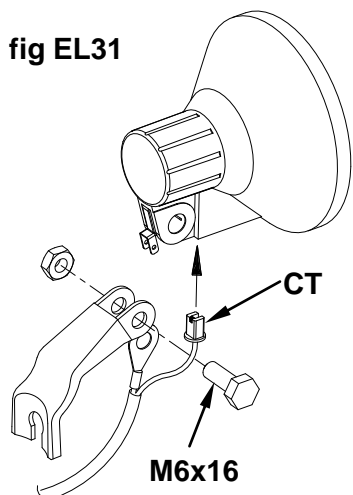
Disconnect the wire(s) from the dynamo (depending on dynamo type, you may have to unravel the main live wire from the live wire for the rear lamp, and also detach the dynamo to release the earth eyelet). Remove the front lamp, and disconnect the live wire. With halogen lamps there is a tab pressed into the base of the bulb holder which has to be withdrawn to disconnect the wire: with incandescent lamps, the lens has to be removed (twist it anti-clockwise), and the bulb unscrewed. Withdraw the old loom from the rear frame and from under the fork crown and discard it.



For L and R types feed the forward end of the new loom (the end with an eyelet for earth and with brown wire plain-stripped) through the hole in the RH rear axle plate (from the outside, inwards) and into the rear end of the chainstay tube, CHS (fig EL40). Push it through till it emerges at the forward end of the CHS, and then, keeping the loom **under** the control cables, draw the loom forward through the centre cable guide CGC, and up through the ring on the cable gatherer CGT. Next (without making a sharp "fold" in the loom yet), feed it down towards the rear of the front forks. Do NOT pass this forward end of the loom through the front cable guide, CGF.

Routing for an E version is similar, but the loom passes through axle-plate & chain stay on the left hand side before crossing over to the right above the rear-hinge and into the Cable Guide Centre.

Feed the forward end of the loom between the fork crown and the front mudguard, starting at the rear on the left, passing in front of the mudguard bracket (not shown), going across diagonally to emerge at the front on the right, and finally passing above the brake caliper.



### Arrangements at front lamp - connect the live wire to the front lamp.

- For a halogen lamp (fig EL31), feed the stripped end of the live (brown) wire through the connector tab CT, and fold it back over the long side of the TOP edge of the tab, and then "smooth" it down. Address this tab to the connector on the underside of the lamp, and press home firmly.

- For an incandescent lamp, bend the stripped end of the brown live wire over, and tuck this into where the bulb fits, and secure it by screwing in the bulb. Fit the lens.

With the earth eyelet tucked inside the bracket (fig EL31), feed the M6 x 16 bolt through the bracket, the eyelet, and the bulb holder, and put the nut on, but not tight (there is no washer here). Tuck eyelet up, under the bracket, set the lamp at the desired angle and then secure firmly in position.

On an E-version without mgds, remove slack by drawing the main loom back gently from behind the fork, and up through the P-clip (brake-nut loose or removed). Make sure that the wiring won't touch the tyre when the handlebar is turned, that the brake is positioned correctly and that the nut is secured with the lamp bracket and the brake caliper central.

### **Rear Loom (dyno to rear lamp).**

If you have an AXA HR dynamo with the earlier connection style (no tab-connectors, just a plastic strip), you must replace the rear loom, but otherwise there's often no need.

To replace, note the existing routing, cut any tiewraps (L- or E-version), remove the rear lamp, withdraw the tab connector there, and remove the loom. Fit the new rear loom to the lamp, attach the rear lamp to its bracket(s), and route the loom down to the dynamo as before (note: for an R-version (with rack) the rear loom may be longer than formerly: it should pass left of, and around the front of the mudguard bracket tab under the rear of the rack. The loom then crosses over the mudguard and behind the dynamo stay - wrapping around it - before entering the hole in the dynamo bracket from the rear. The loom then loops up to the base of the dynamo.

### **Arrangements at rear end - attaching to the dynamo:-**

Feed the rear end of the main loom up to the dynamo:

- for R-version, loop round behind the two Rack Stays (fig EL40) or
- for L-version, loop round the two Mudguard Stays, or
- straight up on the E type.

How the wires are actually connected at the dynamo end depends on the dynamo type: if the dynamo is not the AXA HR type (fig EL13), then you should refer to the paragraph at the end of this sheet.

For an AXA HR dyno, each of the two live leads (brown) should connect to a terminal marked with the 'X' symbols on the base, with each of the two black earth leads being connected to a terminal marked with the standard earth symbol. Use the two inner terminals for the rear loom, and the two outer terminals for the main loom. Push the connectors on firmly.

If the dynamo is not of the AXA HR type, and does not have 2.8mm x 0.8mm connection terminals, you have to make appropriate connections, probably removing the crimp-connectors from the loom(s).

Where the dyno's mounting bracket provides the earth connection, you need to remove the dynamo, and use the short eyelet earth extension, EE, and connector, C, provided. Remove the spade-connectors from the black earth wire(s) on the loom(s), and strip the insulation to leave about 12mm of bare wire. Now twist together the two (or three) stripped ends, feed them into the connector C, and crimp in place (use wire cutters or pliers if you do not have a crimping tool, but take care not to cut right through). When attaching the dynamo, the M6 bolt should pass through the eyelet(s) as shown in fig EL9. Secure the nut partially tight, so that the dynamo can still be moved for setting. Set the dynamo at the correct angle (roller parallel to the tangent to the tyre where it touches), and secure the nut and bolt very firmly. The dynamo roller should lie approx. 6-7mm from the tyre when in the off position: bend the bracket slightly if required.

**Testing.** Check that the lights work OK *before* securing the looms.

### **Securing the wiring looms.**

First, pull the main wiring loom forward gently from in front of the chainwheel, until all the slack at K (fig EL40) aft of the chainstay (CHS), is removed: but do not have it taut here, as the dynamo has to move in and out without stretching the loom. Then, using four of the tie-wraps (TW) provided, tie the dynamo loom to the lowest of the rear cables, the furthest aft tie TW1 to lie just **behind** the centre cable guide, CGC, when the bike is unfolded. The other three should be equi-spaced between TW1 and the cable gatherer CGT (fig EL49). Next, with these four ties in place, fold the sleeve back on itself at the cable gatherer CGT, and tie both parts of the sleeving together. Fit three more tie-wraps to fix the loom to the front brake cable in the positions shown in fig EL49.

For the rear loom, E and L types require one tie wrap directly above the brake tube to secure the loom to the seat stay. L types require a second tie wrap directly underneath the gear cable pulley housing, and E types need one below the dynamo clamp bracket. R types do not require tie wraps.

