

AUSTIN SEVEN DYNAMOS

The following are extracts taken from Motor Engineering by George Newnes Ltd circa 1938

FIRST 7 H.P. MODELS-1922-23:

D.F. Type Dynamo

This machine is similar in construction to the D.F.L. type and is designed with third brush regulation. It is smaller than the D.F.L. type but equally robust. The oil shield is mounted in the same manner and renewal of the felt washer is carried out on the same lines. There is no electric starter fitted to this model and the battery is therefore much smaller. The switch board is of the same type as fitted in conjunction with the D.F.L. dynamo.

APPROXIMATELY 1923-28:

D.F.L. Type Dynamo

This type of dynamo was fitted to the first 7 h.p. model having an electric starter. The working principles of the machine are the same, but in this case there is no resistance coil to affect control of the dynamo output, this being the same throughout. The third brush is attached to a rocker arm assembly visible with the inspection cover removed. A much smaller machine altogether, but quite sturdily built, and fitted with two ball-races. At the driving end, fitted behind the driving pinion is a separate housing containing a felt washer. This washer prevents oil from the engine passing into the dynamo. Where this condition arises the machine will have to be dismantled and thoroughly cleaned. To remove the dynamo, first remove the locating stud which passes through the top of the dynamo housing. This is noticeable because of the spring ball type oiler fitted in the head of the stud. Next, slacken the clamping bolt, grasp the dynamo in both hands, and with a turning movement withdraw it from the housing. Dismantle the machine by removing the two body-fixing rods and withdraw the armature. When the gear or pinion has been removed the felt washer housing can be carefully levered off. Punch out the two rivets which hold the inner portion to the outer. It will be found that the new felt washer will need compressing before the rivet holes come into line.

When reassembling the dynamo, pack the ball-race with H.M.P. grease.

The switchboard fitted with ammeter, and pull-and-push switches, also contains the dynamo field fuse. There are two separate switches for the lighting: one for the headlamps, full on, and the other for the "dim" position. The dim switch connects the two headlamps in series, thereby reducing the light output.

APPROXIMATELY SEPTEMBER 1928- AUGUST 1932:

D E L. Type Dynamo

This machine fitted to the early type coil ignition models differs only in the construction. The armature in this case being fitted with a driving end and commutator end ball-race. The resistance coil is fitted internally, being wound round one of the field coils. This functions in the same way as already described.

The switchboard is of the S.M. type combining the ammeter, ignition and lighting switches. A relay switch assembly is also fitted to ensure the full charging rate when the headlights are on irrespective of the position of the charging switch. The cut-out, although of a heavier pattern, functions in the same manner as the later types. Tests, adjustments, etc., follow the same procedure. The headlamps with double filament bulbs fitted are controlled by a 2 way switch fitted to the steering column. The starter motor, mounted in this case on top of the flywheel housing by the foot pedals, follows the same line of construction as later models.

7 H.P. MODELS, 1932-35 (APPROXIMATELY) :

Dynamo Type C.35A.

This dynamo is constructed on the same lines as the C35M. The former, it however, has a resistance unit mounted on the body of the machine instead of being incorporated in the cut-out and fuse unit. Both machines function on the same lines, the third brush controlling the output in the same way. The C35A dynamo brushes are fitted directly on to the moving brush arm by single fixing screws. When renewing it is only necessary to loosen these and the old brushes can be slipped from underneath the heads of the screws. The brush arm is extended to provide a stop in the event of badly worn brushes to prevent the head of the fixing screws from damaging the commutator. The resistance unit also carries the field fuse together with a spare fuse. In the event of complete dynamo failure one of the points to be examined will be the connections of the field coil lead and the main brush lead to the resistance unit. The unit is screwed to the body of the dynamo by two fixing screws sunk into the moulded base. The resistance coil ends should be removed from the dynamo and field terminals and the coil raised to allow the screws to be removed. The connecting wires can then be examined. When refixing the resistance unit make sure that the fixing screws go right home. Should they be left high there is the possibility of the lead coming into contact with the resistance coil and earthing the field circuit.

The cut-out and fuse unit CF3-L is of the same type as fitted to the 6-volt 10 h.p. system. The rest of the electrical equipment in principle is the same. On the earlier models the headlamps are fitted with double filament bulbs instead of the dipping reflector.

7 B.P. AUSTIN Dynamo (1936 TYPE):

Dynamo C35M.

This dynamo is a shunt-wound machine in that the third brush regulator is employed. The correct charging rate for this machine is 10 amps. Should the dynamo output be persistently low: examine the brushes to see, that they are free and that the bedding surface is correct; especially does this apply to the control brush. Do not alter the position of the control brush until these points have been checked. To raise the output, move that control brush forward in the direction of rotation. Should there be no increase in output between summer and winter charge, examine the connections at the cut-out and fuse units and also at the switch board. This condition would arise from loose or broken connections at these points. If the failure is on summer charge only, examine the fuse. If sound, the fault will most probably be due to a break in the resistance winding in the base of the unit. To test for this fault run the engine at normal speed with the switch at summer charge position and short-circuit the cut-out and fuse unit terminals marked D and F2. The result should be a reading equivalent to the full output.

Cut-out and Fuse Unit

The construction of this follows the same principle as for the 10 h.p. Austin except the resistance coil fitted in the base, and, of course, there is no voltage control regulator. The cut-out itself is almost identical except that the coils are wound for a pressure of 6 volts instead of 12 volts. The terminals are plainly marked and well insulated. Adjustment of the spring tension is made by either rising or lowering the flat metal strip immediately below the spring. The same procedure also applies to the adjustment of the contacts. The dynamo and accessories fuses are housed in the unit, together with the spares. Only standard fuses SB specified by the makers should be used. The accessories fuse controls the screen-wiper and horn. A separate fuse unit controls the electric petrol gauge, direction indicators and stop-light.

The following are approximate dates of modification of electrical equipment during the aforementioned period :-

1932-1933 Lucas Graves D.F. bulbs fitted.

1933 Outside trafficators. 1934 Dipping headlamp reflector and automatic return indicators.

Austin Seven Wiring Diagram

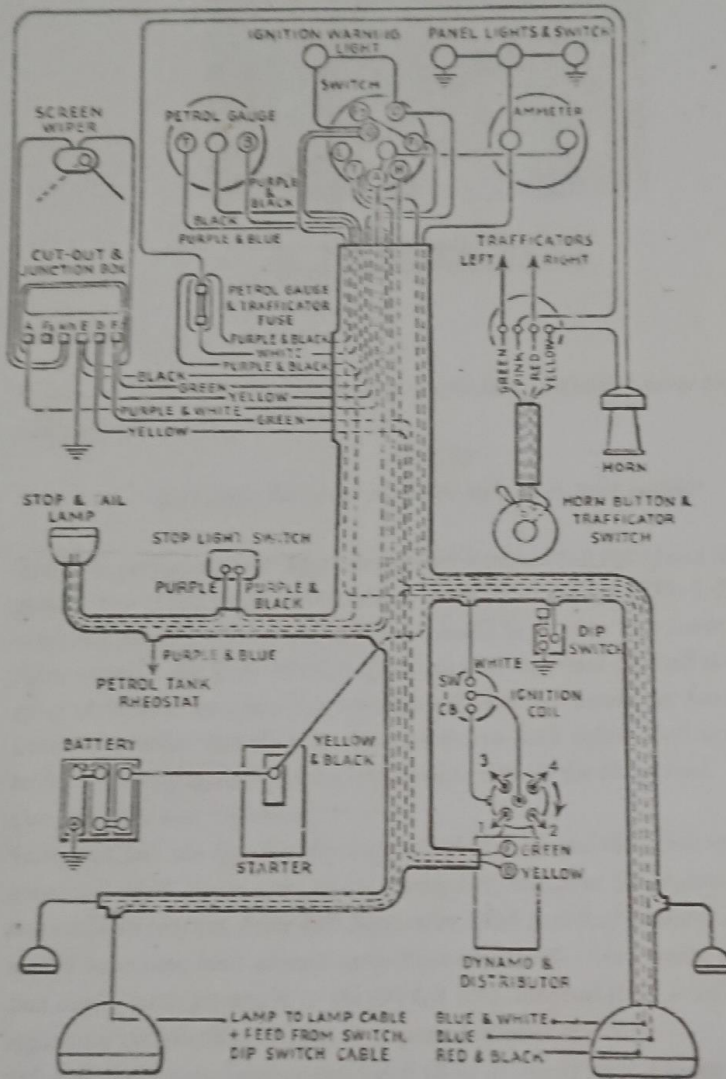


FIG. 33. AUSTIN SEVEN WIRING DIAGRAM

