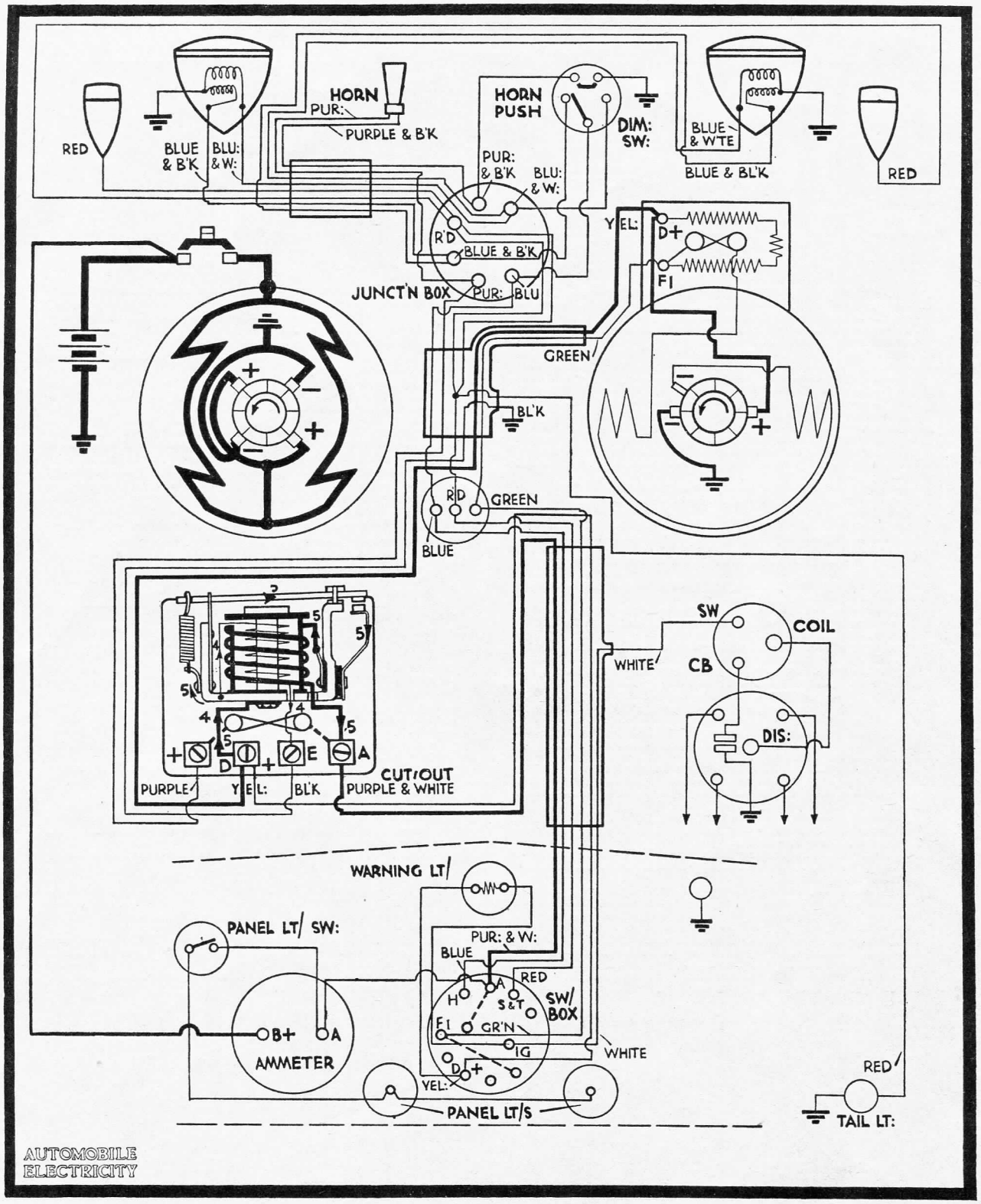
Automobile Electricity Wiring Diagram—D.290



1932 Standard Little 9

Equipment and Test Data for Lucas Sets on 1932 Big 9 and Little 9 Standard Cars

Equipment.

	Big Nine.	Little Nine.
Battery	Type STW9A	Type STW9E
Cutout	,, CF3	,, CF3
Distributor	,, DJH4A	,, DJH4A
Dynamo	,, C45AF	,, C35A
Head Lamps	,, L140EDS	,, RG35
Ignition Coil	,, Q12	,, 4Q6
Instrument Panel	,, 931C/V	,, 831C/V
Side Lamps	,, L206	,, 1130
Starter	,, M418AF	,, M35AF
Steering Column Switch	,, SCL1	,, —
Tail Lamp	,, 40AB	,, T101

Test Data.

Battery.—Type STW9A. 12 volts, capacity 51 ampere hours (10 hour rate). Overall dimensions 13½ in. × 6⅞ in. × 10½ in. 9 plates per cell. Specific gravity of electrolyte when battery is in service : 1·285—1·300 fully charged, 1·210 about half discharged ; 1·150 or under fully discharged.

Battery.—Type STW9E. 6 volts, capacity 51 ampere hours (10 hour rate). Overall dimensions, 7⅜ in. × 6⅞ in. × 10½ in. 9 plates per cell. Specific gravity figures as for type STW9A.

Cutouts.—Insulated base mounted. Four terminals. Terminal E must be earthed. Carries 25 amp fuse under separate cover. Terminal + and E used for additional accessory wiring.

Distributors.—Rotation—clockwise, viewed from driving end. Fitted with automatic advance mechanism. Contact breaker gap set to ·015 in. (gauge on spanner provided). Distributor shaft is lubricated by means of an oiler, through which one or two drops of oil should be added every 1,000 miles.

As fitted to Little 9.—Automatic advance begins at 300–400 distrubtor r.p.m. and gives maximum advance of 16°-18° at 1,500–1,600 r.p.m.

As fitted to Big 9.—Automatic advance begins at 300–400 dist. r.p.m. and gives maximum advance of 11½°–13° at 1,200–1,300 r.p.m.

The cam should be given the slightest smear of vaseline every 3,000 miles.

Every 5,000 miles add a single drop of oil to the pivot on which the contact breaker lever works.

The automatic advance mechanism can be lubricated by removing the rotating distributor arm about every 3,000 miles and adding a few drops of thin oil.

Dynamo.—Type C45AF.—Rotation—clockwise viewed from driving end. Third brush regulation. 4 pole machine, wave wound. 21 skewed slots, 41 commutator bars. 2 main brushes, set at 180°. Brush tension, main 35–45 ozs. ; control 11–14 ozs.

Full Charge.—Cutting in speed (cold) 950–1,050 r.p.m. at 14 dynamo volts. Maximum output 9–10 amps at 2,000–2,200 r.p.m. at 14 dynamo volts.

Reduced Charge.—Cutting in speed (cold) 1,150–1,250 r.p.m. at 14 dynamo volts. Maximum output (cold) 6–7 amps at 2,400–2,600 r.p.m. at 14·5 dynamo volts.

Dynamo.—Type C35A.—Rotation—clockwise viewed from driving end. Third brush regulation. 2 pole machine, lap wound. 12 straight slots, 12 commutator bars. 2 main brushes set at 90°. Brush tension 16–20 ozs.

Full Charge.—Cutting in speed (cold) 1,150–1,220 r.p.m. at 7 dynamo volts. Maximum output (cold) 9–10 amps at 2,200–2,400 r.p.m. at 7 dynamo volts.

Reduced Charge.—Cutting in speed (cold) 1,400–1,450 r.p.m. at 7 dynamo volts. Maximum output (cold) 6–7 amps at 2,700 r.p.m. at 7·5 dynamo volts.

Field Resistance and Fuse Unit.—Type TFR1.—This unit, which is mounted on the dynamo yoke, houses terminals, half-charge resistance, and field fuse, together with spare fuse. Capacity of fuse on Little 9, 6 amps. Capacity of fuse on Big 9, 4·5 amps.

Head Lamps.—Type L140EDS.—Provided with electrically operated dip and switch reflector. Operating unit is protected by a 6 ampere fuse. To focus bulb, slacken clamping clip at back of reflector, when bulb holder can be moved backwards or forwards. Bulbs BAS. 3S (12 volt, 24 watt, single contact).

Head Lamps.—Type RG. 35.—Fitted with Lucas-Graves anti-dazzle bulbs, which give a dipped beam for use when meeting traffic. As these bulbs have been standardised no focusing arrangements are necessary. Bulb LG612.

Ignition Coils.—Types Q12 and 4Q6.—These coils take the minimum of current and consequently the wear on the distrbutor contacts is very small.

Instrument Panel.—Type 831C/v.—The panel houses 20–0–20 centre zero ammeter, type ST8 starter switch, coil ignition warning light, ignition switch, panel illumination switch, and lighting and charging switch type PLC, together with clock, speedometer, etc. The warning lamp bulb is a 2·5 volt, ·2 amp screw cap type. The instruments are illuminated by indirect lighting from bulbs at the back of the panel (type BAS. 8S, 6 volt 3 watt).

Instrument Panel.—Type 931C/V (fitted to Big 9).—This instrument is similar to the type 831C/V except that it does not house a type PLC switch, and also the panel illumination bulbs are BAS10S, 12 volt, 6 watt.

Side Lamps.—Type L206.—Bulbs BAS10S (12 volt, 6 watt).

Side Lamps.—Type 1,130.—Bulbs BAS8S (6 volt 3 watt).

Starter Motor.—Type M35AF.—Rotation—clockwise viewed from driving end. 4 pole machine, wave wound, 21 straight slots, 21 commutator bars. Lucas drive with 10 tooth pinion. 4 brushes set at 90°. Brush tension 40–50 ozs. No load 45–50 amps, 5·9 volts at 5,000–6,000 r.p.m. Lock torque 6 lbs. ft. with 400–420 amps and 3·2 volts.

Starter Motor.—Type M418AF.—Rotation—clockwise viewed from driving end. 4 pole machine, wave wound, 21 straight slots, 21 commutator bars. Lucas drive with 10 tooth pinion. 4 brushes set at 90°. Brush tension 22–27 ozs. No load 55 amps, 11·0 volts at approx. 2,800 r.p.m. Lock torque 10–12 lbs. ft. with 410–440 amps and 6·8 volts.

Steering Column Switch.—Type SLC1.—This switch is fitted at the bottom of the steering column and is controlled by a lever at the centre of the steering wheel. The switch positions are as follows :

Summer Half Charge.—Dynamo giving approximately half its full output.

Winter Full Charge.—Dynamo giving its maximum output.

Side.—Side and tail lamps on.

Head—Head, side and tail lamps on.

Dip—Side and tail lamps on ; off side head lamp switched off, and near side head light beam dipped and turned to side of road.

The dynamo automatically gives its full output when the lamps are switched on.

Stop Tail Lamp.—Type 40AB.—Bulbs BAS10S (12 volt 6 watt). Stop light controlled by brake pedal switch.

Tail Lamp.—Type T101.—Bulb BAS. 8S (6 volt 3 watt).

N.B.—1. All units follow standard Lucas design. See AUTOMOBILE ELECTRICITY, March, 1931, for full description of Dynamo C45AF, Field Resistance TFR1, Starter 418AF, Steering Column Switch SCL1.

2. Connections and rotation of machines in D290 as seen from commutator ends. Change of rotation connections shown below. Different sets on 1933 Models.

3. For mechanical service and test data of Standard cars, see *Motor Commerce* for September.

Connections for Alternative Direction of Rotation of Dynamos and Starters