

SECTION 15 — CONTROL PRESSURES

Main pressure, obtained direct from the two oil pumps, is used to operate all the servo pistons and to supply oil for conversion to lower controlling pressures by the governor and control valves.

Compensator pressure is obtained by metering main pressure through ports controlled by a compensator valve, spring and auxiliary valve. This pressure is lower than pump pressure and is directed to the front and rear band servos to increase the holding force as driving torque increases.

Throttle valve (T.V.) pressure, obtained as already described, acts on the compensator valve to regulate the compensator pressure in accordance with throttle opening.

T.V. oil is metered past the T.V. regulator valve to act on the shift valves and also to the regulator plugs which controls the ports permitting pressure to act on

the shift valves. The regulator plugs lock the shift valves in gear after an up or down change and so prevent 'hunting'.

Governor pressure No. 1 (G1), obtained by metering oil past the valve controlled by the larger governor weight, is directed to the 3-4 shift valve, overrun valve 3-4 overspeed valve, 1-2 shift valve, 2-3 G1 plug, reverse blocker piston and the 4-3 timing valve in the front servo.

The high rate of pressure increase, caused by the large governor weight, gives accurate control at low road speeds.

Governor pressure No. 2 (G2), obtained by metering oil past the valve controlled by a small governor weight, is directed to the 2-3 auxiliary valve, the 3-4 overspeed valve and the 3-4 governor plug.

The rate of G2 pressure increase is greatest at high road speed, G1 pressure having reached its maximum.

ROLLS-ROYCE AUTOMATIC GEARBOX

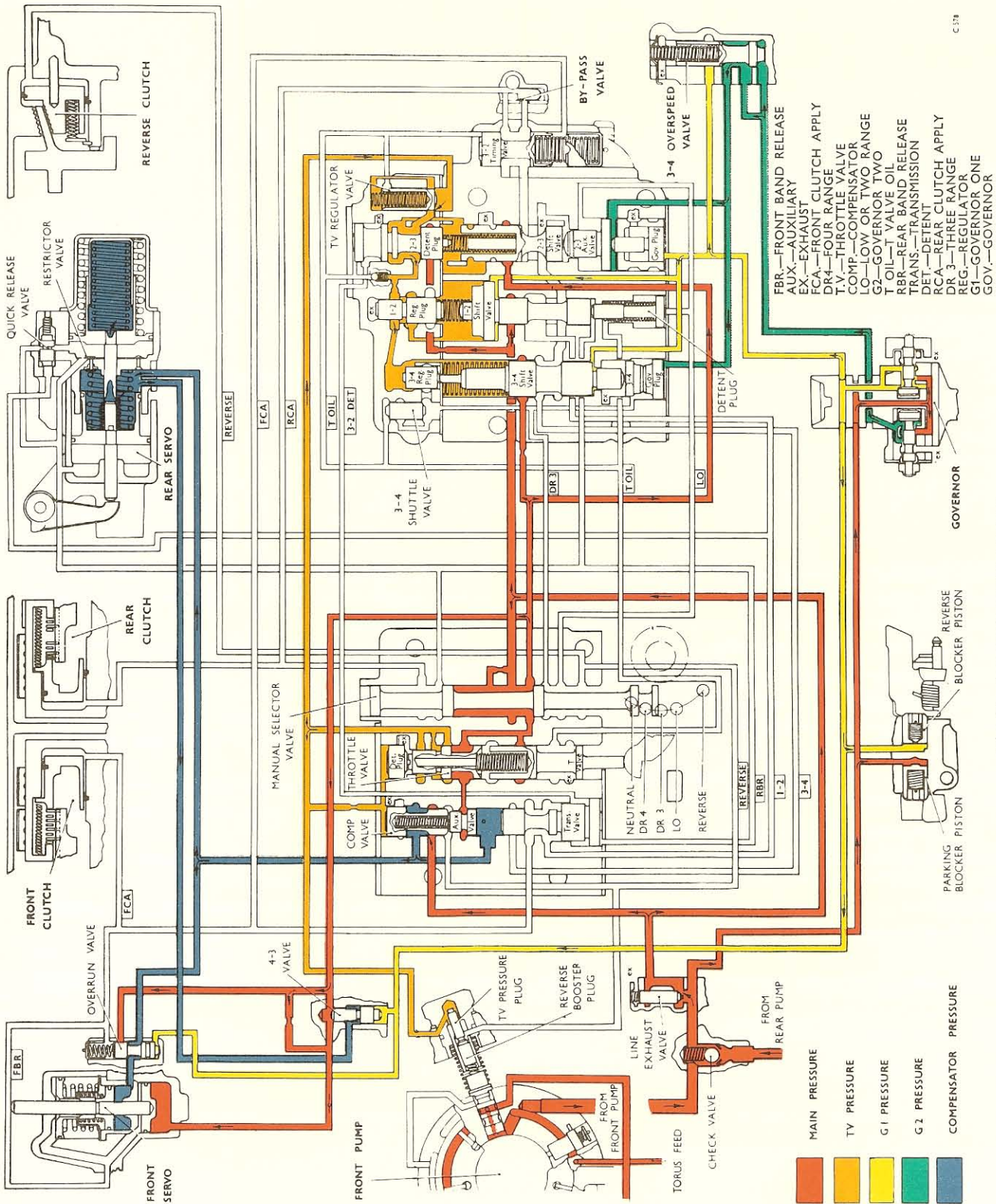


Fig. 20 Automatic control diagram