

Excess Fuel set up

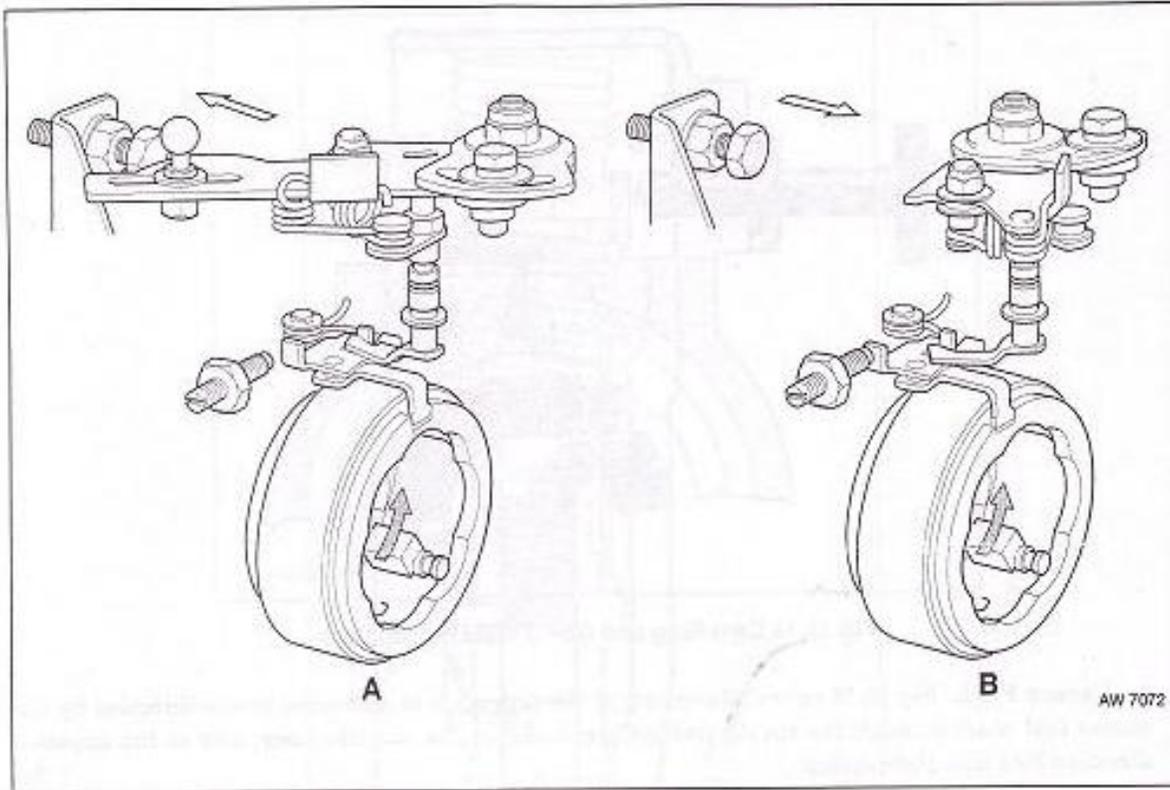


Fig 15.15 Scroll Plate Mechanism with Mechanical Excess Fuel

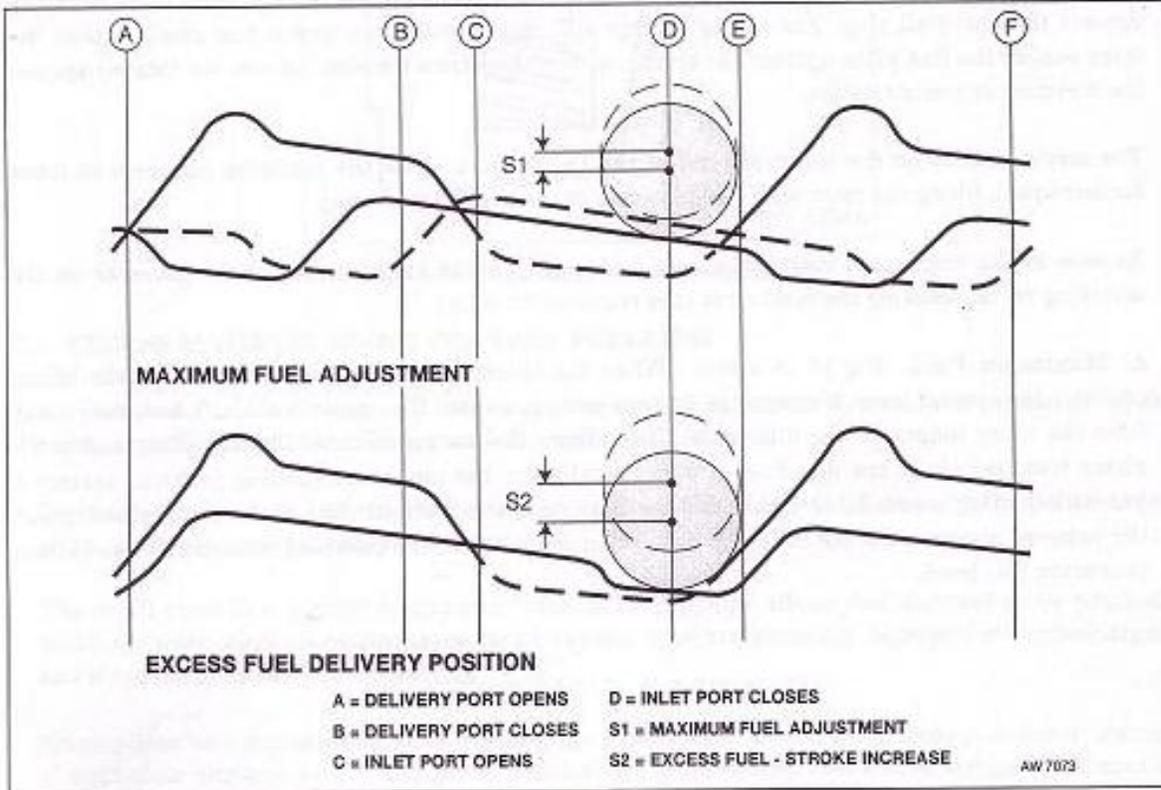


Fig 15.16 Schematic Diagram - Scroll and Cam Phasing

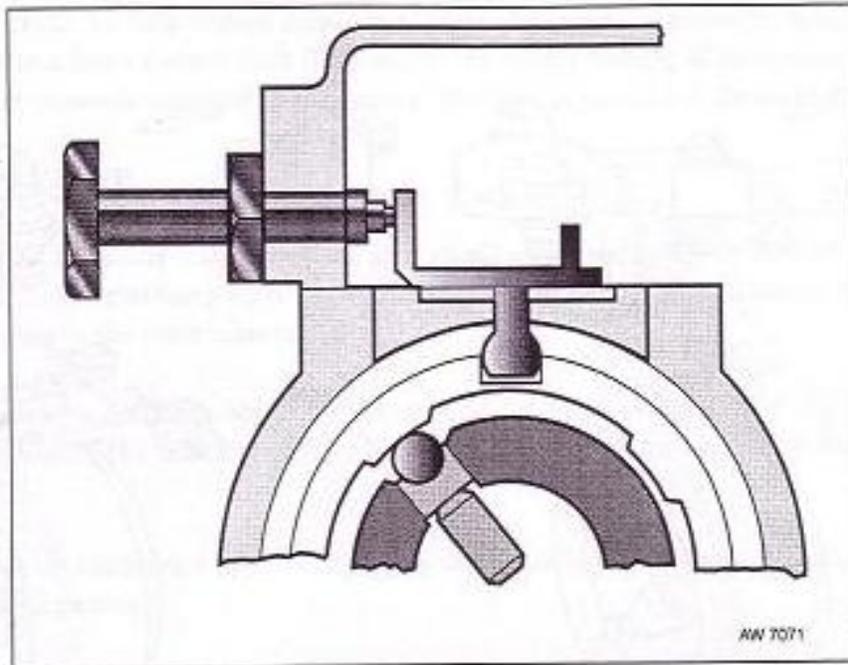


Fig 15.14 Cam Ring and Scroll Plate Mechanism

b. **Excess Fuel.** Fig 15.15 refers. Movement of the link plate is controlled in one direction by the excess fuel shaft through the spring linkage connected to the throttle lever, and in the opposite direction by a link plate spring.

At engine cranking speeds, when automatic excess fuel is required, the throttle lever must be closed against the anti-stall stop. The spring linkage will have rotated the excess fuel shaft so that the lever pushes the link plate against the spring. At the same time the scroll plates are rotated against the direction of pump rotation.

The scroll profiles on the internal rims of the plates then allow the pumping plungers to move further apart, filling the rotor with fuel in excess of the normal maximum.

As soon as the engine self-sustains, excess fuel is terminated by the action of the governor on the metering valve, reducing the fuelling to that required for idling.

c. **Maximum Fuel.** Fig 15.16 refers. When the throttle lever is moved away from the idling position, the control lever, through the linkage spring, rotates the excess fuel shaft and lever away from the inner tongue of the link plate. This allows the spring to move the link plate and scroll plates transversely in the direction of pump rotation to the maximum fuelling position, against a pre-set adjusting screw. In this position, the profiles of the internal rims of the scroll plates check the outward movement of the rollers and shoes, in contact with the pumping plungers, to the normal maximum fuel level.