

# SUNTEC MODEL A-7400 FUEL UNIT

## SOLENOID DUMPING PUMP

(CLOSED - OR ENERGIZED - POSITION)

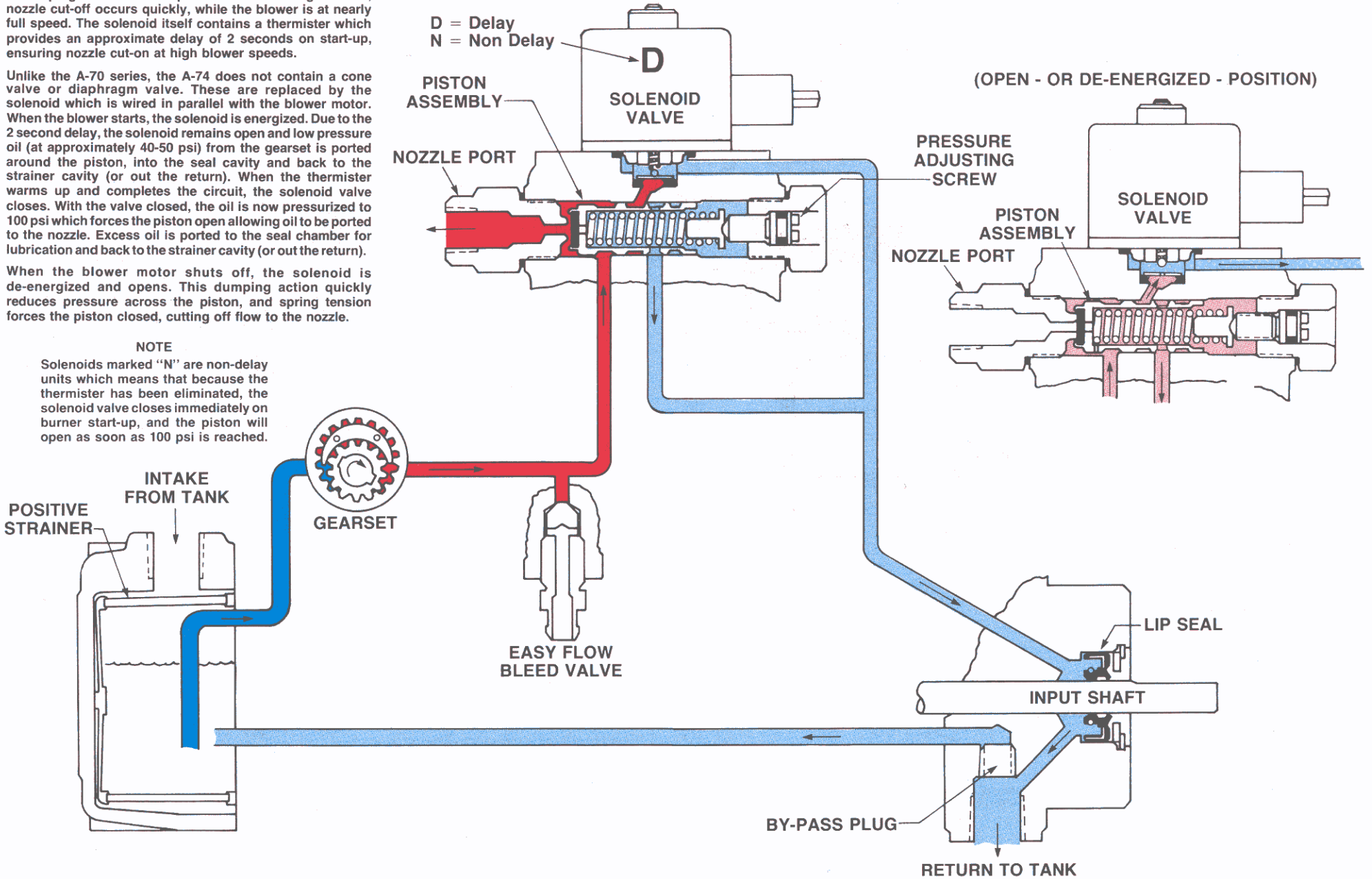
The A-74 series pump is the ultimate in fuel unit design. With a dumping solenoid incorporated in the charge circuit, nozzle cut-off occurs quickly, while the blower is at nearly full speed. The solenoid itself contains a thermister which provides an approximate delay of 2 seconds on start-up, ensuring nozzle cut-on at high blower speeds.

Unlike the A-70 series, the A-74 does not contain a cone valve or diaphragm valve. These are replaced by the solenoid which is wired in parallel with the blower motor. When the blower starts, the solenoid is energized. Due to the 2 second delay, the solenoid remains open and low pressure oil (at approximately 40-50 psi) from the gearset is ported around the piston, into the seal cavity and back to the strainer cavity (or out the return). When the thermister warms up and completes the circuit, the solenoid valve closes. With the valve closed, the oil is now pressurized to 100 psi which forces the piston open allowing oil to be ported to the nozzle. Excess oil is ported to the seal chamber for lubrication and back to the strainer cavity (or out the return).

When the blower motor shuts off, the solenoid is de-energized and opens. This dumping action quickly reduces pressure across the piston, and spring tension forces the piston closed, cutting off flow to the nozzle.

**NOTE**

Solenoids marked "N" are non-delay units which means that because the thermister has been eliminated, the solenoid valve closes immediately on burner start-up, and the piston will open as soon as 100 psi is reached.



■ HIGH PRESSURE OIL    
 ■ LOW PRESSURE OIL    
 ■ RETURN OIL    
 ■ OIL UNDER SUCTION

# SUNTEC MODEL B-8400 FUEL UNIT

## SOLENOID DUMPING PUMP

(CLOSED - OR ENERGIZED - POSITION)

D = Delay  
N = Non Delay

(OPEN - OR DE-ENERGIZED - POSITION)

