

Transfer Switch Operation

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Up until mid 2010, Firetrol controller intentionally did not transfer to the alternate source if the fire pump (Normal) disconnecting means opened. Limit switches in the fire pump circuit breaker inhibited the generator start signal from being sent and inhibited the transfer switch control panel from transferring; even if alternate power was available, if the breaker was turned off or if it tripped. NFPA 20 now specifies that the controller will attempt to start the generator and transfer to the alternate source if the fire pump disconnecting means is opened.

It was a safety design philosophy.

A) **SERVICE** - If the disconnecting means was manually opened, it may be due to service work being done; therefore the generator would not receive the start signal and would not supply power to a system that may be in the service mode. This keeps the controller dead and the pump will not inadvertently start in the event that the alternate disconnecting means was not opened.

B) **MOTOR FAULT** - If the fire pump circuit breaker tripped, there is a fault in the motor circuit, the design kept the alternate source from being connected to a faulted system.

Since it is not always practical to turn off the normal source for testing, the Firetrol controllers have the test switch. The controller is required to start and transfer to the alternate source if one or more phases of the normal source fail or drop below a certain percent of nominal. Operating the Test Switch simulates a loss of the A phase to the transfer switch control panel. Sensing the loss, the controller should transfer. Therefore the recommended way to test power failure is with the Test switch (if there is no power disconnect ahead of the fire pump controller.) After 30 minutes, the system should transfer back to the normal source. The other selector switch; "Immediate" can be used to override the 30 minute re-transfer timer.

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