

20/A20/25/A25 series Swichgag[®]

Application Note: 'F' (Fault Sensitive) option

yi6413
16th December 2005
catalogue section 05/10



Please read the following information before installing. A visual inspection of this product for damage during shipping is recommended before installation. It is your responsibility to ensure that qualified mechanical and electrical technicians install this product. If in doubt, please contact your local Murphy representative.

Description

'F' option Swichgages are designed for use with 'Fault Sensitive', closed-loop engine protection systems. 'F' option Swichgages have the same general operation as standard units (contacts closing to ground during fault), but have a stud terminal in place of the standard wire connection. The stud terminal allows the Swichgag contact to be more easily connected to two wires as part of a 'closed loop' system.

For further information on 20/A20/25/A25 series Swichgages, please see the relevant bulletin and installation instructions.

'Closed loop' circuit operation.

In the connection diagram below, the fuel solenoid (engine running) is controlled by a Murphy 518-APH magnetic switch.

To start the engine, close the ignition switch and push the 518-APH reset button. Battery positive is then fed:-

- inside the 518-APH, from the 'B' terminal, to the NC contact, through resistor R, and on to the SW1 terminal,
- out of the 518-APH and around the closed loop wiring,
- back to 518-APH terminal SW2 and the coil.

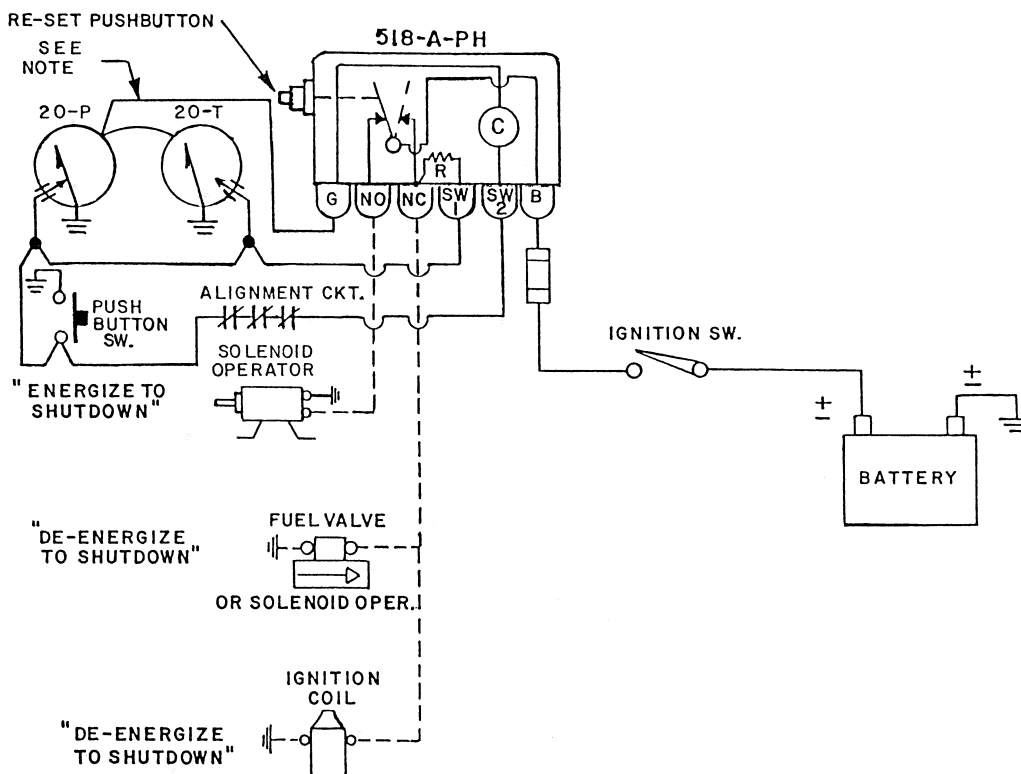
The 518-APH coil energises, and the positive DC closed loop circuit is maintained, provided that the other side of the 518-APH coil is connected to ground (battery negative) via terminal G and the Swichgag earth wiring.

Power will be removed from the 518-APH coil, and the engine will stop, if either:-

- any part of the of the 'closed loop' is connected to negative (e.g. via closing Swichgag contacts, or via the 'push-to-stop' button). When this happens, 518-APH resistor R provides a load (preventing a dead short) between the closed loop negative connection and battery positive.
- or
- the 'closed loop' goes open circuit at any point.

The closed loop system has the advantage of being more 'fault sensitive', in that wiring integrity must be maintained for the engine to keep running. With standard 'closed to ground' wiring, an open circuit connection (e.g. to one of the Swichgages) would not be detected as a fault condition and the engine would keep running.

Closed Loop Connection



FRANK W MURPHY LTD.

Church Road, Laverstock, Salisbury, SP1 1QZ, United Kingdom

tel: +44 (0)1722 410055 fax: +44 (0)1722 410088

email: sales@fwmurphy.co.uk web: www.fwmurphy.co.uk



USA - ISO9001:2000 FM 28221
UK - ISO9001:2000 FM 29422