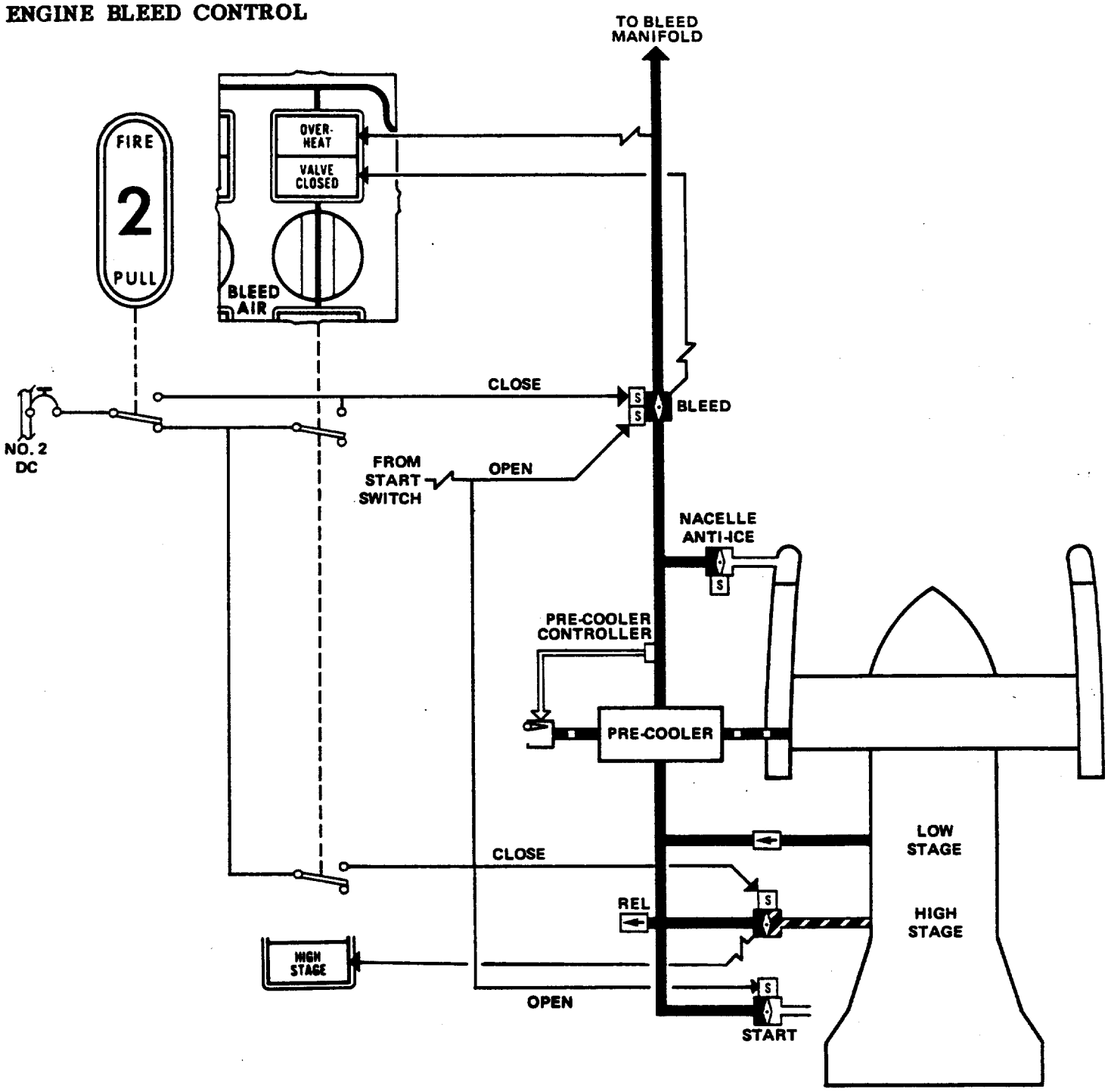
DOCKET NO. **SA- 516**

EXHIBIT NO. **2O**

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C

PNEUMATIC SYSTEM DIAGRAMS

ENGINE BLEED CONTROL



CODE/CONDITION

LOW BLEED PRESS. .....
HIGH BLEED PRESS. .....
FAN AIR .....

ENGINE OPERATING

NO. 2 ENGINE SHOWN (TYPICAL).

* * *

BLEED AIR SUPPLY

WING ISOLATION VALVE SWITCH

Controls operation of associated wing isolation valve.

P6 – AC BUS 2 & 3 – WING ISO VALVES L.H. & R.H.

OVERHEAT LIGHT

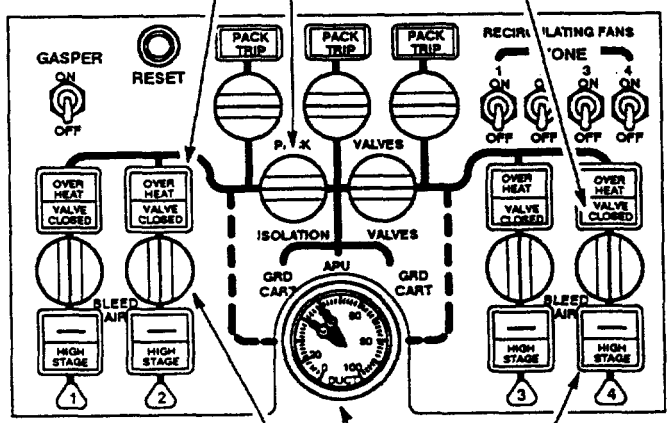
One light indicates excessive bleed air temperature within the duct downstream of the bleed valve.

P12 – DC BUS 1 – IND/WARN LTS – F/E.

VALVE CLOSED LIGHT

Indicates engine bleed air valve is closed.

P12 – DC BUS 1 – IND/WARN LTS – F/E



ENGINE BLEED AIR VALVE SWITCH

OPEN – Allows engine bleed and high stage valves to open and regulate duct pressures when engine is operating.

CLOSE – Energizes both the engine bleed and high stage valves to close. Valves are operated by air pressure.

P12 – DC BUS 1, 2 & 3 – BLEED AIR VALVES – ENG 1, 2 &3.

P12 – ESS DC BUS – BLEED AIR VALVE ENG 4.

HIGH STAGE LIGHT

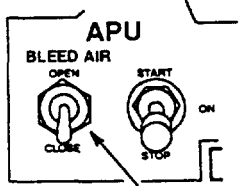
Indicates high stage bleed valve is open.

P12 – DC BUS 1 – IND/WARN LTS – F/E

DUCT PRESSURE INDICATOR

Indicates pressure in left and right bleed air ducts.

P6 – ESS AC BUS – BLEED AIR PRESS.



APU BLEED AIR VALVE SWITCH

OPEN – If APU RPM above 95%, opens APU bleed valve and, when AC power available, opens the APU isolation valve.

CLOSE – APU isolation valve and APU bleed air valve close.

P83 – APU BAT BUS – APU SUPPLY B.

P6 – AC BUS 3 – VALVES – APU BLEED.