

BASE DESIGNS

- AIR TO OPEN with PST
- AIR TO OPEN without PST
- Hydraulic or Pneumatic
- AIR TO CLOSE ESDV
- CONTROL VALVES

UNIVERSAL 2004D SOV DESIGN



RELIABILITY MEANS

HIGH OPERATIONAL AVAILABILITY

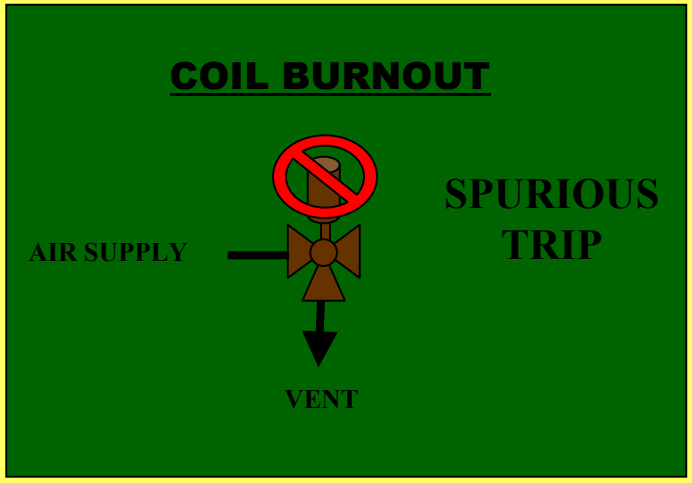
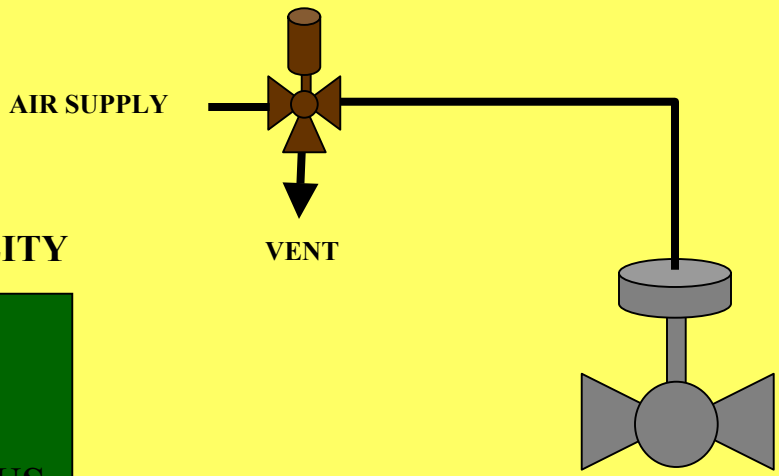
MEANS: THE ABILITY TO KEEP THE VALVE OPEN

HIGH SAFETY AVAILABILITY

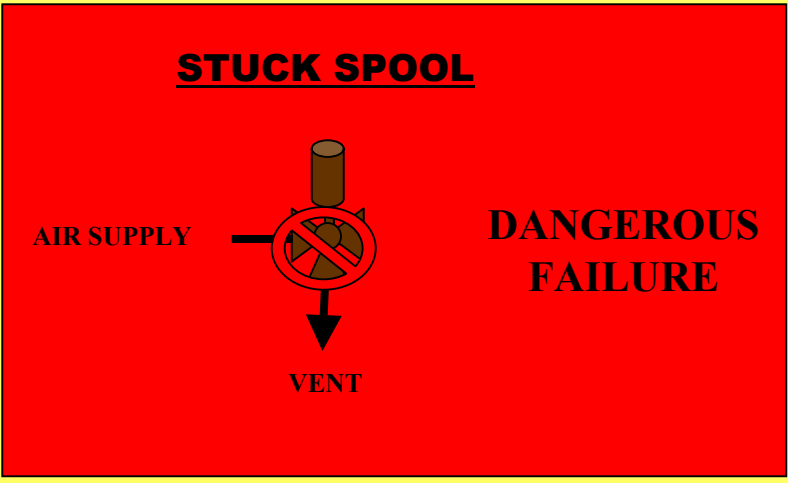
MEANS: THE ABILITY TO CLOSE THE VALVE

1oo1 SOV

THE ISSUE IS:
 LOW OPERATIONAL AVAILABILITY



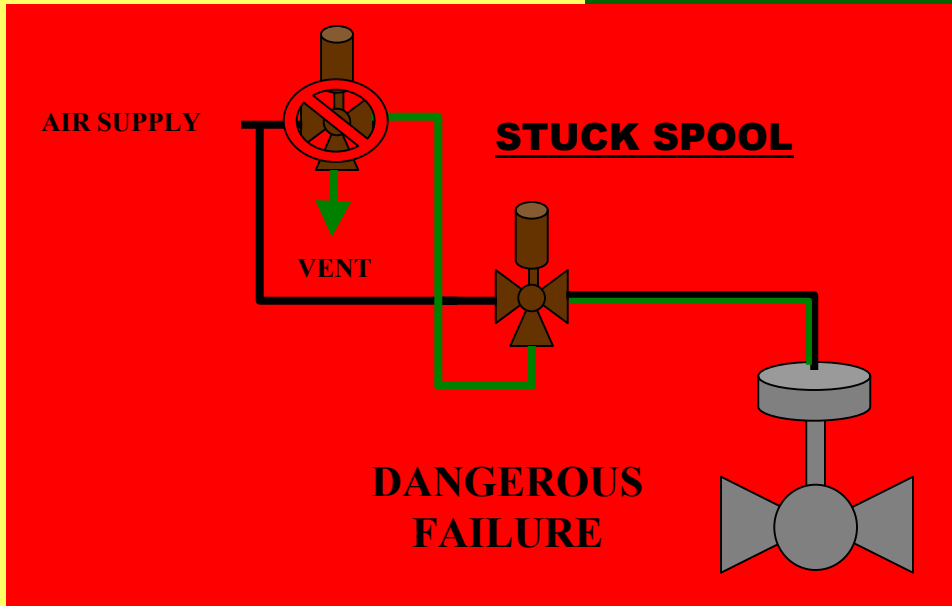
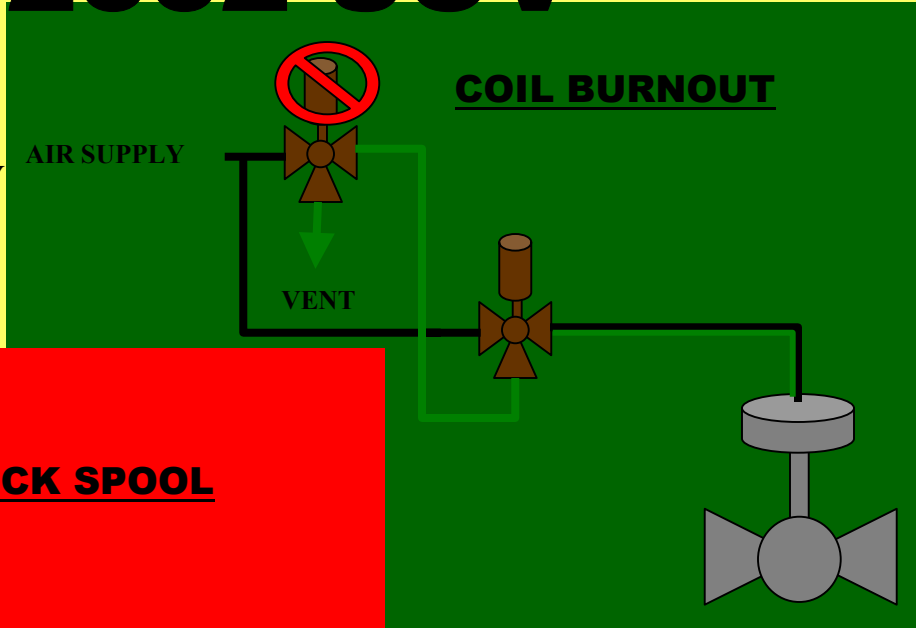
THE ISSUE IS:
 LOW SAFETY AVAILABILITY



SILstroke-3 --A FAULT TOLERANT "PST" SOLUTION

GENERIC 2oo2 SOV

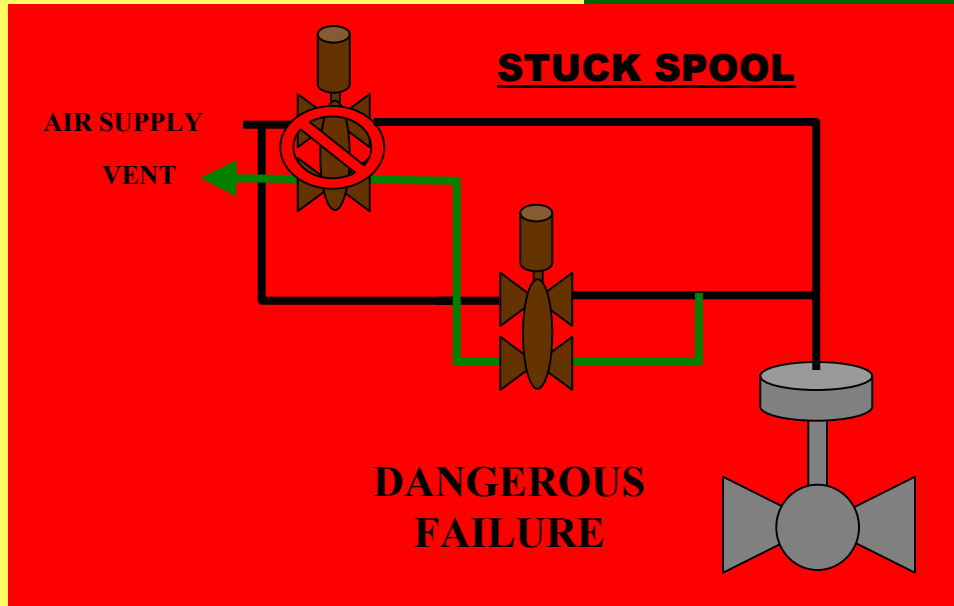
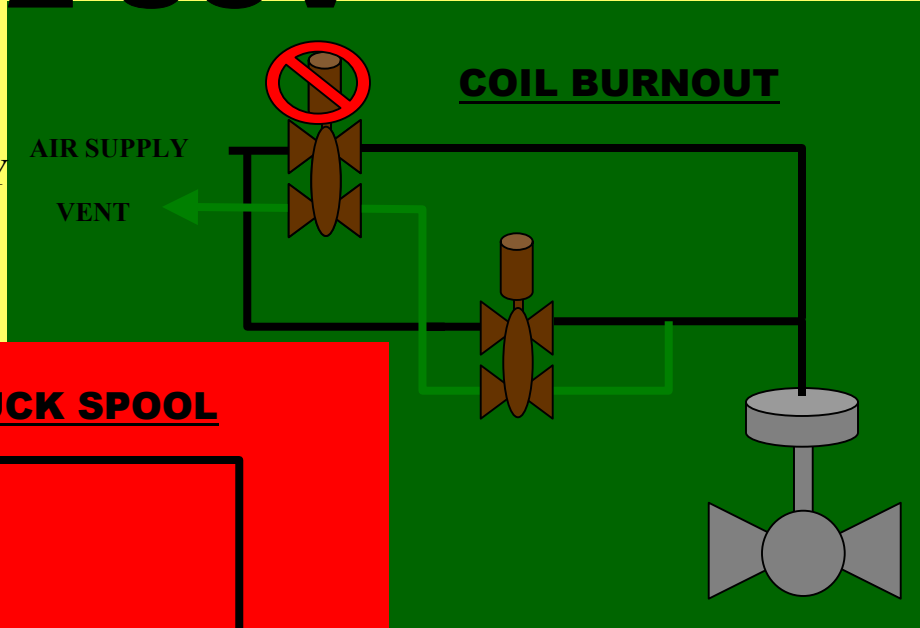
THE BENEFIT IS:
OPERATIONAL AVAILABILITY



THE ISSUE IS:
LOW SAFETY AVAILABILITY

ASCO 2002 SOV

THE BENEFIT IS:
OPERATIONAL AVAILABILITY



THE ISSUE IS:
LOW SAFETY AVAILABILITY

SUPPLY & VENTING INTEGRITY

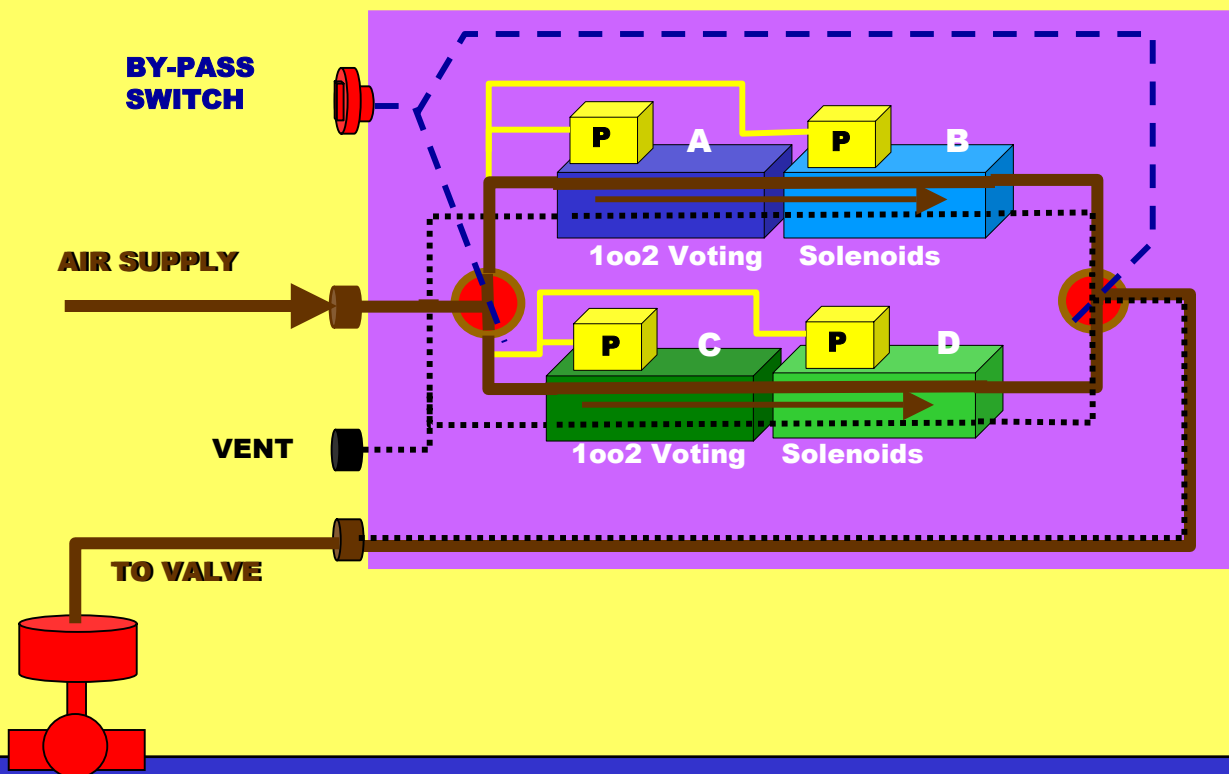
SPSI
•SERVICES
•PRODUCTS
•SYSTEMS
•INTEGRITY

NO SINGLE POINT OF FAILURE

TWO PARALLEL PATHS

- REDUNDANT PATHS – A & B (or) C & D
A & B and C & D

FAULT TOLERANT AIR SUPPLY



SPSI
•SERVICES
•PRODUCTS
•SYSTEMS
•INTEGRITY

SILstroke-3 --A FAULT TOLERANT "PST" SOLUTION

SUPPLY & VENTING INTEGRITY

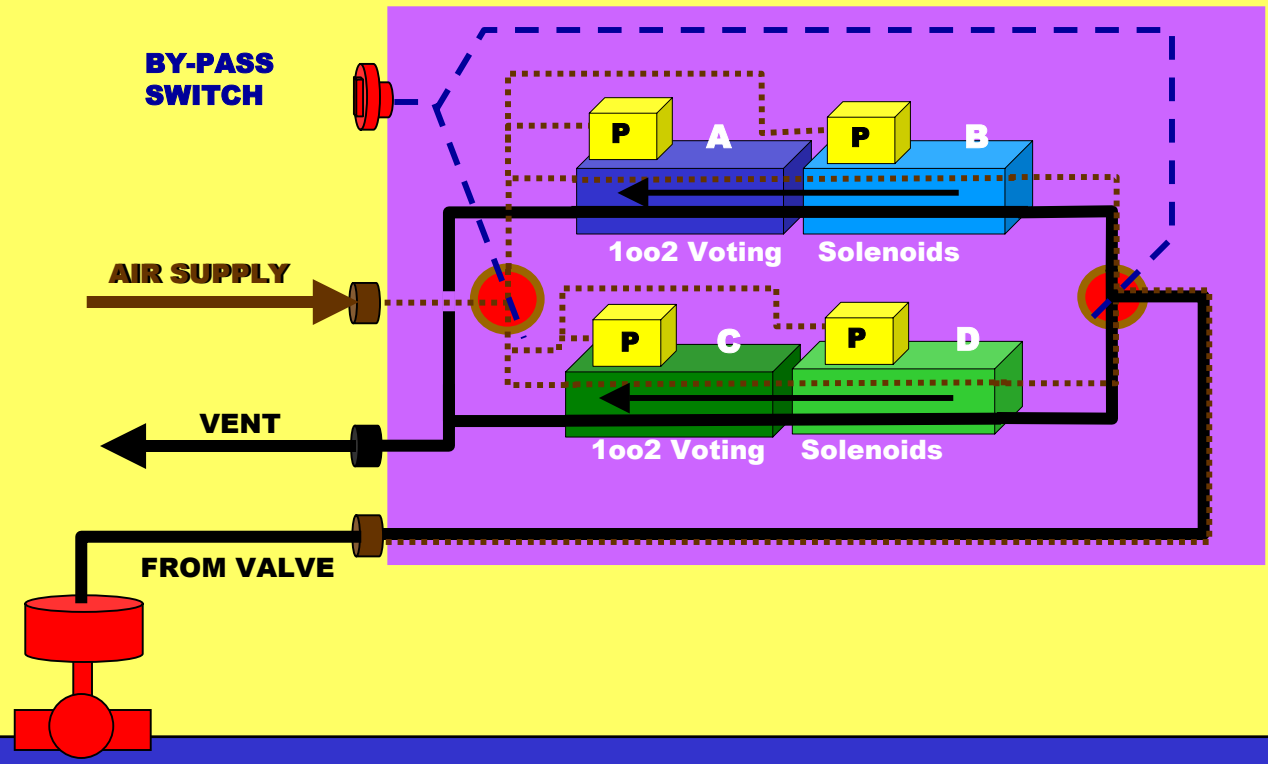
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NO SINGLE POINT OF FAILURE

TWO PARALLEL PATHS

- REDUNDANT PATHS – A & B (or) C & D
A & B and C & D

FAULT TOLERANT VENTING



SPSI
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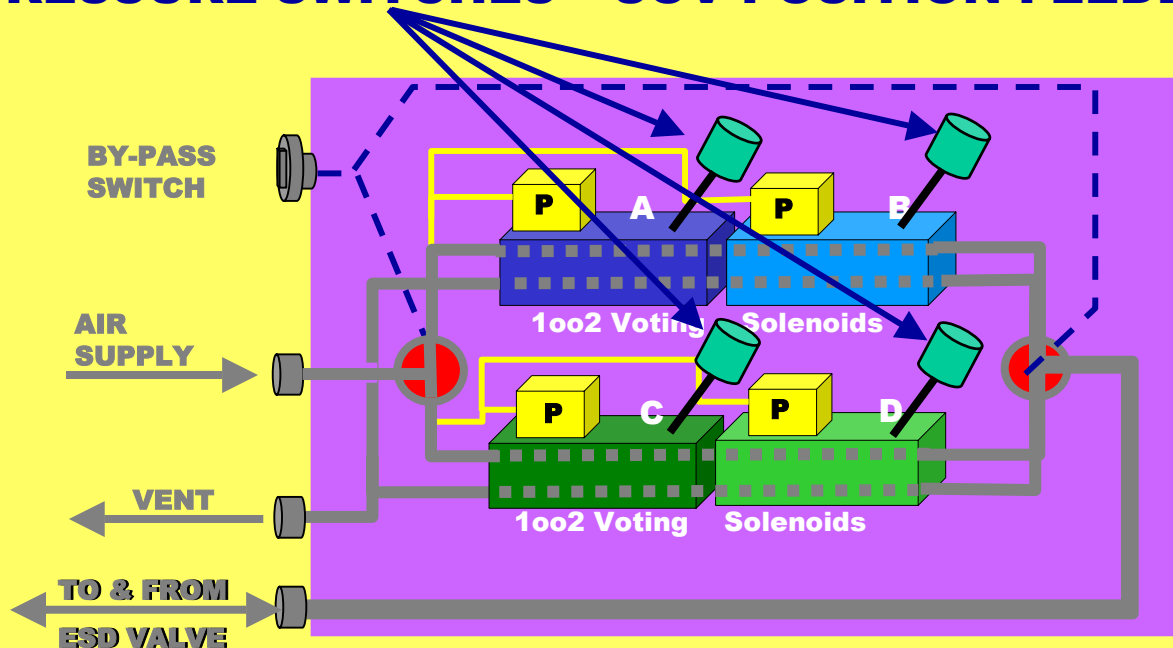
SILstroke-3 --A FAULT TOLERANT "PST" SOLUTION

SPOOL FAILURE

DETECTING SPOOL FAILURES

- EACH SOV HAS A **PRESSURE SWITCH** PLACED WITHIN ITS BODY TO DETECT ACTUAL SPOOL MOVEMENT WHEN DE-ENERGIZED.

PRESSURE SWITCHES – SOV POSITION FEEDBACK



SIF RELIABILITY NUMBERS

ANSI/ISA S84 – SAFETY LOOP

TECHNOLOGY COMPARISONS

	POSITIONERS	ASCO 2oo2D	SILstroke-3
PLUGGED NOZZLE	☹☹☹☹	😊	😊
FAIL SOV - CLOSE	☹	😊	😊
FAIL SOV - OPEN	☹☹	☹☹☹☹	😊
<1.0 Cv RATING	☹☹	☹	😊😊😊😊
FAULT TOLERANT	☹☹	☹☹	😊😊😊😊
ON-LINE REPAIR	☹☹	☹☹	😊😊😊😊
LOCAL TESTING	😊	😊	😊😊😊😊
LOCAL LIGHTS	😊	😊	😊😊
TEST 1 ST – PST 2 ND	☹	☹	😊😊😊😊

SILstroke-3 --A FAULT TOLERANT “PST” SOLUTION