

DEC 1 1995

B/L: 094.00

SYS: Compressed Air  
For Firex Diesel

**Critical Item:** Relief Valve (3 Items Total)  
**Find Number:** CRV-1.1, RRV-1.1, RRV-2.1  
**Criticality Category:** 1S

<b>SAA No:</b>	09GS08-004	<b>System/Area:</b>	Compressed Air for Firex Diesel Start
<b>NASA Part No:</b>	None	<b>PMN/ Name:</b>	K61-3414/Compressed Air for Firex Diesel Start
<b>Mfg/ Part No:</b>	Kunkle Valve Division/ 6283ED	<b>Drawing/ Sheet No:</b>	80K50638/8

**Function:** Provide system protection from overpressure will relieve pressure above 269 psi.

**Critical Failure Mode/Failure Mode No:** Fail open/09GS08-004.001

**Failure Cause:** Structural failure or contamination

**Failure Effect:** Loss of Firex Diesel Start capability. This failure could cause loss of life, vehicle and/or loss (damage) of a vehicle system if coupled with a fire/hazardous condition. Failure is detected by low pressure indication at the CCS console. Time to effect is immediate.

### ACCEPTANCE RATIONALE

#### Design:

- Component is an off the shelf item.
- Valves are designed with bronze/brass trim and have a working pressure of 300 psi. The maximum operating pressure is 250 psi.
- Valves cracking pressure (270 psi) is 90% of set pressure and reset pressure is 75% of set pressure (225 psi).
- Valves are located inside the Utility Annex Building.

#### Test:

- OMRS File VI requires annual operational test of the relief valves.
- The valves are operationally tested in accordance with OMI M7027 which checks/adjusts valve cracking pressure.

DEC 1 1995

**Inspection:**

- Annual calibration is performed on relief valves in accordance with OMI-M7027.

**Failure History:**

- Current data on test failures, unexplained anomalies, and other failures experienced during ground processing activities can be found in the PRACA database. The PRACA database was researched and no failure data was found on this component in the critical failure mode.
- The GIDEP failure data interchange was researched and no failure data was found on this component in the critical failure mode.

**Operational Use:**

- Correcting Action:  
The relief valve can be manually isolated and a backup system placed on line.
- Timeframe:  
One hour maximum