

Application Data

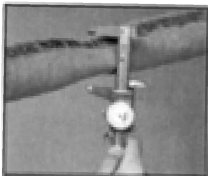
General Hose Information

Look for any indication of kinking or broken reinforcement as evidenced by any permanent distortion, longitudinal ridges, or bulges.

According to RMA IP-11-7 Chemical Hose Bulletin, crushed or kinked spots where the hose O.D. is reduced by 20 percent or more of the normal O.D. indicate the hose probably has internal damage. The hose assembly must be removed from service to ensure the safety of people in the work area.

WARNING: Kinks can cause hose to burst, leading to bodily harm.

Hose containing kinked or crushed spots where the hose O.D. is reduced by 20 percent may be used if the hose passes the hydrostatic tests. Use a caliper to measure the hose outer diameter at several places around the diameter to determine any O.D. reduction. An inspection mirror and a flashlight can be used to inspect the inner tube for abuse, wear, and/or chemical attack.



2. Couplings

All metals are subject to attack by various chemicals. Check with the manufacturer to make sure that suitable end fittings, appropriate to both the hose and the chemical being handled, are being used.

Exposed surfaces of couplings, flanges and nipples shall be examined for cracks or excessive corrosion. Either condition shall cause the hose assembly to be retired from service. Any evidence of coupling or nipple slippage on the hose is cause for removing the hose assembly from service.

The Rubber Manufacturers Association (RMA) has published a series of technical bulletins which detail maintenance, testing, and inspection recommendations.

Because the life expectancy of the hose is limited, the user must be alert to signs of impending failure, particularly when the conditions of service include high working pressures and/or the conveyance or containment of hazardous materials. The periodic inspection and testing procedures described here provide a schedule of specific measures which constitute a minimum level of user action to detect signs indicating hose deterioration or loss of performance before conditions leading to malfunction or failure are reached.

SAFETY WARNING:
Failure to properly follow the manufacturer's recommended procedures for the care, maintenance and storage of a particular hose might result in its

failure to perform in the manner intended and might result in possible damage to property and serious bodily injury.

Hydrostatic Pressure Test

For large-bore hose being used in dock service, an inspection card which describes the hose, manufacturer, date received, purchase order number, and date of installation should be maintained for each hose. The inspection card should be used to record the test results and condition of the hose.

Eaton recommends that new hose assemblies be hydrostatically tested before being placed in service. Hydrostatic testing should be done at periodic intervals to determine if a hose is suitable for continued service. The hydrostatic test and examination shall be conducted in the following manner.

Hose to be pressure tested must be restrained by placing steel rods or straps close to each end and at approximate 10 foot (3m) intervals along its length to keep the hose from "whipping" if failure occurs; the steel rods or straps are to be anchored firmly to the test structure but in such a manner that they do not contact the hose which must be free to move.

1. Hose shall lie in a straight and horizontal position supported on rollers to permit easy movement when under the test pressure.
2. Water should be used as the test liquid. Never pressure test with solvents, corrosive liquids, or with compressed gases.
3. Fill the hose with water with the outlet end raised and the outlet valve open to ensure the complete removal of air. When all the air has been expelled, close the outlet valve and lower the raised end.
4. For new hose, raise the pressure to 2 times the rated working pressure of the hose and hold for 5 minutes. During this hold period, the hose shall be examined for leaks at the couplings, fitting slippage, or for any indication of weakness in the hose structure.
5. For used hose, test with a pressure of 1-1/2 times the rated working pressure of the hose for one minute and examine as above.
6. Completely relieve test pressure from the system prior to releasing hose from test equipment.
7. Thoroughly drain the water from the hose after completion of the hydrostatic test.

Electrical Continuity

When required by the user, electrical continuity between the fittings shall be tested using an ohm meter. The hose must be clean and dry for this test.