DrillSafe

INSPECTION OF FLEXIBLE HOSES

DRILLER'S RESOURCES

FLEXIBLE HOSE DAMAGE

All flexible hoses are designed to transfer some type of fluid and so if the hose leaks or bursts, the flow of fluid will be interupted and this may cause a fatality or injury, equipmemnt damage or environmental damage. It important therefore that any wear or damage is identified before the hose begins to leak or it bursts.

ALL flexible hoses must therefore be inspected on a daily basis as part of the pre-start inspection. These inspections are visual inspections only and so we can only look for obvious external damage and for leaks from the hose.

TYPES OF EXTERNAL DAMAGE

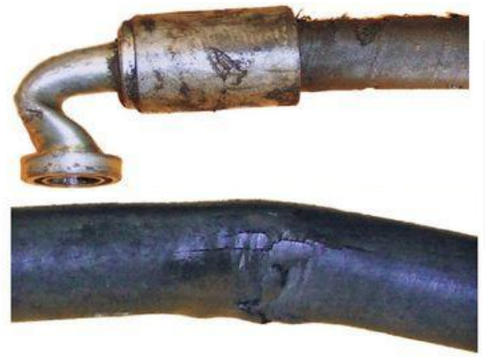
Abrasion of the cover – this can occur when a hose rubs against a moving or vibrating part and it will damage the cover of the hose and eventually expose the reinforcing.

Skived cover – a skived hose is one where a large section of the cover has been removed exposing the reinforcing. Again, the exposed reinforcing will corrode and weaken the hose.

Cracked cover – this can occur through normal wear and tear or because the hose has been exposed to extreme heat or a chemical that has hardened the cover. Water will enter the cracks and begin the corrode the reinforcing of the hose.

Leaking or broken fitting – All flexible hoses are used to connect two components and so all flexible hose must be secured to the components. In some hoses, threaded fittings are "crimped" onto the hose and sometimes the fluid leaks past the fitting or, the hose separates from the fitting.

Damaged fitting – fittings may be damaged through a number of causes but any hose with a damaged fitting must be immediately replaced.



Kinked hose – If a hose gets trapped between two components or if it is bent, the cover and reinforcing will be damaged, and this will lead to a failure of the hose.

INSPECTION OF FLEXIBLE HOSES

It is only possible to visually inspect the cover and the fittings of flexible hoses for damage as shown above. The following guidelines may assist in identifying damage and avoiding injury during inspections.

1. Look carefully at all places where hoses are in contact with the body of any equipment for abrasion damage to the cover of the hose.
2. Look carefully where hoses are bent to make sure that the hose is not bent too tightly or that it is kinked to such an extent that there is a restriction to flow.
3. Closely check hoses that are close to sources of heat for hardening or cracking.
4. If you believe that any hose is leaking but you cannot see the leak, never run your finger along the hose to try to locate the leak. High pressure fluid can easily penetrate the skin and cause serious injury.
5. On many drill rigs, hydraulic hoses are tightly held in groups and so it may be necessary to move some hoses to get better visual access to the hoses. Even if the drill is locked out, some hydraulic lines may still be under pressure and so extreme caution must be exercised when moving any hose that may potentially be under pressure. NEVER use your hands to move hydraulic hoses during an inspection.
6. Look carefully at air, sample or water hoses that lie on the ground to identify any abrasive wear or cuts in the cover. Lift these hoses to inspect the underside but only do so when the compressor or pump has been shut down and pressure in the hose has been released.
7. Never attempt to tighten (or loosen) any flexible hose connection unless you are certain that the equipment has been locked out AND the pressure in the hose has been released.