

PROPER INSTALLATION & HOSE ROUTING

PROPER HOSE INSTALLATION

Warning: Improper selection, installation or maintenance of a hose assembly, may result in premature failures, bodily injury, or property damage.

The following practices should be used when replacing a hydraulic hose assembly or installing a new hydraulic assembly.

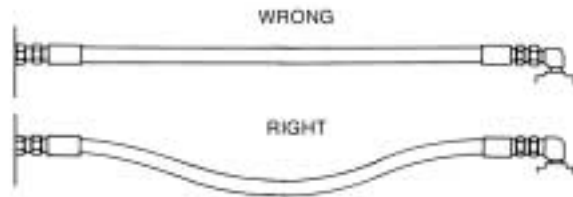
- 1) A pre-installation inspection should include the following:
 - a. Check to insure the hose is the correct specification in style, size, and length.
 - b. Check that the hose assembly has no visible non-conformity.
 - c. Check fittings for any damage including nicks or burrs.
 - d. Check that the hose is routed properly using suggested guidelines.
 - e. Check that the hose is not damaged (kinked, crushed, twisted).
- 2) Handle assembly with care. Avoid bending hose beyond the recommended bend radius.
- 3) Hose assemblies should not be installed in a torqued or twisted condition.
- 4) Use necessary restraints and protective devices when necessary to reduce wear and stress points on the assembly.

CORRECT ASSEMBLY INSTALLATION & ROUTING

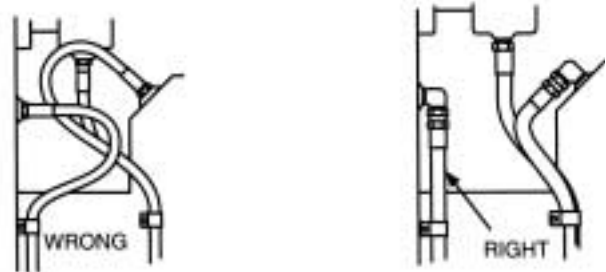
Satisfactory performance and appearance depend upon proper hose installation. Excessive length destroys the trim appearance of an installation and adds unnecessarily to the cost of the equipment. Hose assemblies of insufficient length to permit adequate flexing, expansion, or contraction will cause poor power transmission and shorten the life of the hose.

The diagrams below offer suggestions for proper hose installations to obtain the maximum in performance and economy.

Since hose may change in length from +2% to -4% under the surge of high pressure, provide sufficient slack for expansion and contraction.



Obtain direct routing of the hose through use of 45° and 90° adapters and fittings. Improve appearance by avoiding excessive hose length.

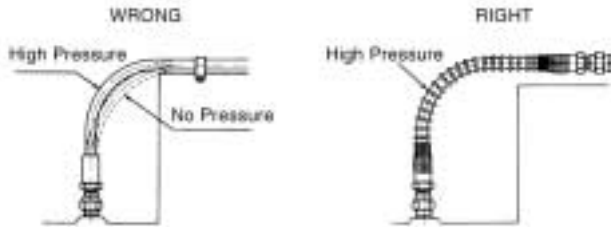


Avoid sharp twist or bend in hose by using proper angle adapters.



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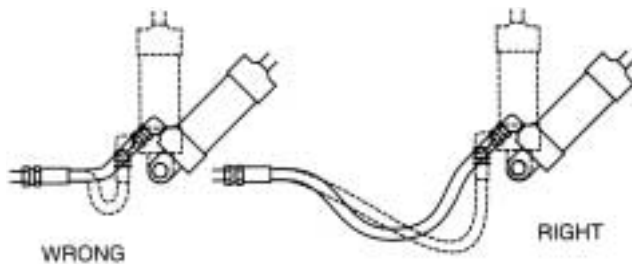
Due to changes in length when the hose is pressurized, do not clamp at bends so the curves can absorb changes and protect the hose with a spring guard. Do not clamp high and low pressure lines together, and protect the hose with a spring guard.



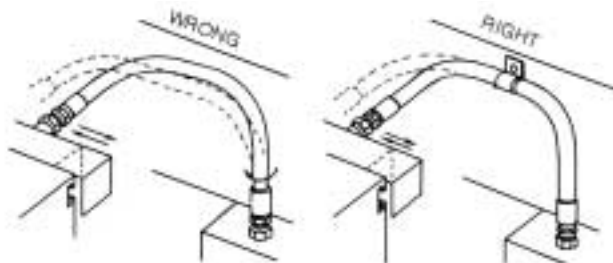
Where the radius falls below the required minimum, an angle adapter should be used as shown above to avoid sharp bends in the hose.



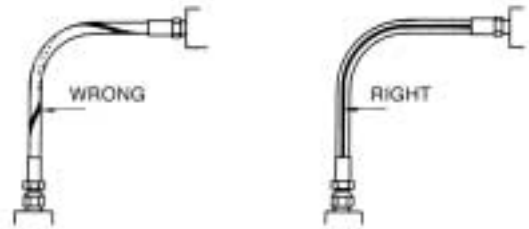
Adequate hose length is most important to distribute movement on flexing applications and to avoid abrasion.



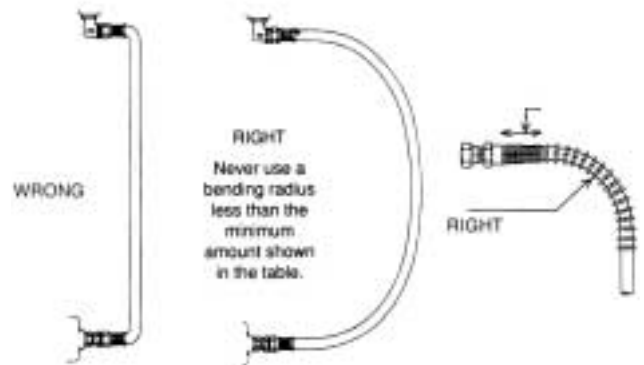
To avoid twisting in hose lines bent in two planes, clamp hose at change of plane, as shown.



Hose should not be twisted. Hose is weakened when installed in a twisted position. Also, pressure in twisted hoses tend to loosen fitting connections. Design so that machine motion produces bending rather than twisting.



To prevent twisting and distortion, the hose should be bent in the same plane as the motion of the boss to which the hose is connected.



Never use a bending radius less than the minimum shown in the hose specification tables. Avoid a sharp bend in the hose to reduce collapsing of line and restriction of flow by using proper spring guard. Exceeding minimum bend radius will greatly reduce hose assembly life.

