



**Guidelines for Structurally Supporting
HPR-01 Pumps Assemblies**

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There are various mounting configurations for Linde HPR-01 pumps; 4/2 bolt SAE C or D mount, or SAE 3 or 4 engine bellhousing mount. For most applications, when attached with appropriate size and strength of bolts and torqued to the proper values, these mounts normally provide sufficient strength to support the weight of the primary HPR-01 pump to which they are affixed, and additional support to the pump is not necessary. However, when additional weight is to be carried by the primary pump, or when external dynamic loads are anticipated on the pump assembly, additional support may be necessary to insure the structural integrity of the pump's mount. Linde Hydraulics Corporation offers the following reference information for the structural support of Linde HPR-01 pumps. Due to shock loads and vibration associated with real life applications, each condition should be thoroughly analyzed by the machine design engineer to determine what degree of support is actually needed. The information shown below are guidelines only and are not to be considered absolute.

Single Pumps with SAE C or D mounts. (If 2 bolt mounts are used, horizontal mount is recommended.)

The following are examples of single pump assemblies and a general recommendation for additional support. Shock and vibration loads are not considered in these examples.

1. Single HPR-01 pump.	No Additional Support Required.
2. Example 1 with a PTO pump and / or manifold physical attached to the primary pump such that the total weight of the entire assembly weighs less than 1.5 times the weight of the primary pump.	No Additional Support Required.
3. Example 2 with a total weight equal to or greater than 1.5 times the weight of the primary pump.	Additional Support is Recommended.
4. Example 2 with a total weight equal to or greater than 2 times the weight of the primary pump.	Additional Support is Required.

Single Pumps and Double Pumps (HPR_D) with SAE engine mounts.

The following are examples of pump assemblies and a general recommendation for additional support. Shock and vibration loads are not considered in these examples.

1. Single HPR-01 pump.	No Additional Support Required.
2. Example 1 with a PTO pump and / or manifold physical attached to the primary pump such that the total weight of the entire assembly weighs 2 times the weight of the primary pump or less.	No Additional Support Required.
3. Example 2 with a total weight greater than 2 times but less than 2.5 times the weight of the primary pump.	Additional Support is Recommended.
4. Example 2 with a total weight equal to or greater than 2.5 times the weight of the primary pump.	Additional Support is Required.
5. HPR_D-01 double pump with factory pilot pump.	No Additional Support Required.
6. Example 5 with a PTO pump and / or manifold physical attached to the pump such that the total weight of the entire assembly weighs less than 1.25 times the weight of the primary pump.	Additional Support is Recommended.
7. Example 5 with a total weight up to 1.5 times the weight of the primary pump.	Additional Support is Strongly Recommended.
8. Example 5 with a total weight equal to or greater than 1.5 times the weight of the primary pump.	Additional Support is Required.