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Proper Use of Bearings for 3.5” Floor Slats

3D Bearing 3003

The 3D Bearing snaps to the 1" X 1" sub-deck and sits directly over the trailer's cross-member. The floor slat is installed over the 3D bearing, which guides the floor slat in the proper place. The 3D Bearing is designed to perform multiple functions. The wings on the sides of the bearing distribute the weight of the load and help stabilize the floor slat, maintaining a level floor deck.

A variety of bearings are used in the installation of a KEITH® *WALKING FLOOR*® unloader. There should be a KEITH bearing of some configuration installed at intervals of no more than one foot apart (* on commodity trailers, the distance is at 18" to 21" intervals). The farther the 3D Bearings are spaced from each other, the greater potential for movement of the floor slats from side to side. The maximum recommended distance from 3D Bearings to 3D Bearing is seven feet, with other bearings installed between.

Hold-Down Bearing 3004

A Hold-Down Bearing is designed to hold the floor slat to the sub-decking of the trailer. The Hold-Down Bearing snaps on from the bottom of the 1" x 1" sub-decking, between the cross-members of the trailer. This bearing is installed in situations where the floor slats may encounter potential force from underneath.

The installation of the Hold-Down Bearings at the discharge end of the floor slat is not required when a "T"-Block is used in conjunction with 3D Bearings only. However, one Hold-Down Bearing per floor slat is required at the bulkhead. If no T-blocks are installed on the trailer, then two Hold-Down Bearings per slat are required – one at the discharge end of the trailer and one at the bulkhead of the trailer. This protects against the lifting of the floor slats, which is caused by build up of debris on the fifth-wheel plate, under the front slope shield or threshold. Hold-Down Bearings become a very important bearing when installing Splash Guard Bearings. A Hold-Down Bearing is required at each end of the Splash Guard Bearing, no farther than seven-feet apart, to protect against the floor slat lifting.



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“T”-Blocks

“T”-Blocks are bolted or torque-screwed into place at the discharge end of the trailer. When used, one “T”-Block per/slat is installed. They are slightly longer than the stroke of the drive unit. This enables them to be used as a type of Hold-Down bearing, as well as for helping prevent material from getting under the floor slats at the discharge end of the trailers. “T”-Blocks are not recommended for solid waste applications, unless the blocks are in front of the stroke travel and there is a flow path for material to exit the system before coming into contact with the “T”-Blocks.

Splash Guard Bearing

The Splash Guard Bearing is designed to distribute the weight of the load on the top surface and wings of the bearing. This bearing covers the underside of the floor slat, and can be installed in various lengths, up to six-feet. Splash Guard Bearings help protect the underside of the floor slats from road debris accumulating near the tires. It is necessary that they be installed correctly to achieve these results. This is accomplished by installing the Splash Guard Bearing in lengths of six-feet or less, and installing the correct combination of 3D and Hold-Down Bearings. Install one each of the 3D Bearing and Hold-Down Bearing at each end of the six-foot Splash Guard Bearing. The Splash Guard Bearing should not be installed tight against the threshold plate or bulkhead, as an opening is required to allow for material to escape while unloading. The Splash Guard Bearing may be installed in shorter lengths, using the same procedure as installing a 3D and Hold-Down Bearing at each end. The maximum distance between the 3D Bearing and Hold-Down Bearing, when installed with the Splash Guard Bearing, is seven-feet.

Deciding where and when to install Splash Guard Bearings should be based on the possibilities of debris collecting under the Splash Guard Bearings. Problem areas can include over the fifth wheel plate or over a fender. These areas have the potential to accumulate road debris or material that has sifted under the floor slats. Road debris that has accumulated under the frame of the trailer can also create problems. The material trapped under the floor slats can build up and result in lifting of the floor slats.

When considering installing Splash Guard Bearing in a top load trailer that hauls solid waste, demolition or other loads that may create a concentrated impact on the floor, it is best to use the Splash Guard Bearing in three-foot lengths. As with a six-foot length of Splash Guard Bearing, a 3D and a Hold Down Bearing should be installed at each end of the Splash Guard Bearing.



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Regularly washing the road debris and sifted material from the underside of the trailer will help cut down on maintenance costs. If this is not possible, the Splash Guard Bearing can still be installed with the proper 3D and Hold-Down Bearings. However, it is recommended to install the 3D and Hold-Down Bearings with the Splash Guard Bearings being placed only between the trailer's cross-members. If 3D Bearings and/or Hold-Down Bearings are installed in the areas where debris may accumulate, the same lifting affect may occur.

The fifth-wheel plate is always a difficult area, but if "clean out" holes are drilled, where structurally permitted, this will provide the best results along with the installation of the Splash Guard Bearings. Material should not be allowed to lift the flooring, as this results in extra bearing wear. Material build-up under the floor slats causes friction and "ups" the operating pressures needed to operate the floor due to this added friction. Relief valve pressure may open during operation, causing excessive heat during unloading.

Please be sure to use the recommended instructions regarding bearing installations. Failing to follow the guidelines concerning the installation of bearings could result in damage to the flooring.

Please contact KEITH Mfg. Co. at our head office in Madras, Oregon at (800) 547-6161 or our Canadian office *WALKING FLOOR* International Canada in Brantford, Ontario at (800) 514-6085 if you have any further questions or concerns.



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