

## Dodge® ISAF Hydraulic mounted bearings: frequently asked questions

The new Dodge Hydraulic ISAF uses a hydraulically assisted mount and dismount feature for easy installation and removal. Below are some of the most frequently asked questions concerning this Dodge product.

- Q. Does the hydraulic fluid used during the installation enter the sealed bearing cavity and react with the lubrication?
- A. No. The hydraulic fluid is contained within the hydraulic nut and piston. After the bearing is mounted with the hydraulic pump, the hydraulic fluid withdraws back into the pump as the mounting nut is tightened on the adapter. Hydraulic fluid will not enter the sealed bearing cavity, nor will it be present after installation.
- Q. Do I need to purchase two separate part numbers for expansion and non-expansion?
- A. There are two different part numbers for the expansion and non-expansion bearings. The non-expansion bearing will come with a stabilizing ring. If necessary, the stabilizing ring from a non-expansion unit can be removed to convert it to an expansion bearing.
- Q. Is the Hydraulic ISAF dimensionally interchangeable with standard USAF/USDAF housings?
- A. Yes. The Dodge Hydraulic ISAF is a drop in replacement for an equivalent bearing's USAF or USDAF housing.
- Q. Will the Hydraulic ISAF provide the same performance of USAF and USDAF products?
- A. Yes. The Dodge Hydraulic ISAF has the same load and grease-speed ratings as the equivalent bearing's capacity in USAF and USDAF housings.
- Q. Are bearings with different internal clearances available and if so, do the mounting instructions change?
- A. Although special, non-standard bearings with different internal clearances can be utilized and the installation instructions will be the same. The starting position and the final position distances will not change. Only the bearing itself will be different.

- Q. Other bearing manufacturers have similar mounting techniques as the Hydraulic ISAF. What makes this one different?
- A. The Dodge bearing has a dismount feature. This dismount feature is also integral to the bearing. It is not a separate component that is removed or lost. The advantage is that the Dodge bearing is not damaged upon removal. Competitive hydraulic mount bearings do not have a removal feature and commonly need to be torched off the shaft. This results in possible shaft damage, costly shaft repair or replacement. The Dodge Hydraulic ISAF was designed for quick dismounting so a new insert can be installed on the shaft for minimal customer downtime.
- Q. What is the current offering that Dodge has on this bearing?
- A. Currently the Dodge Hydraulic ISAF is available in 8 to 15 inch bore sizes. Dodge is preparing to launch the Hydraulic ISAF down to 5-7/16 inch bore size and the 231 series Hydraulic ISAF is currently in development.
- Q. What is the difference between the mount and dismount side of the bearing?
- A. The mount nut has a nameplate (as shown below) while the dismount nut will not have one. Also, the mount nut has seven sets of drilled and tapped holes to mount the lock clips of the bearing. The dismount nut has only three.
- Q. Is the Hydraulic ISAF capable of oil lubrication like the USAF?
- A. No. The Dodge Hydraulic ISAF is designed for grease lubrication only. The USAF bearing housing has a large reservoir for oil lubrication as well as drain holes and an equalization channel. The Hydraulic ISAF housing does not. However, another advantage of the Hydraulic ISAF is that it comes prelubricated as the USAF does not.
- Q. What is the misalignment capability of the Dodge Hydraulic ISAF?
- A. One half of a degree of misalignment ( $1/2^\circ$ ).
- Q. What kind of seals does the Dodge Hydraulic ISAF have?
- A. The Dodge Hydraulic ISAF will come standard with two different seal types (shown below). The first is a full-contact triple lip seal that is mounted within the unitized bearing and contacts the outside diameter of the mounting and dismounting nuts. The second seal is a labyrinth auxiliary seal that is mounted above the mounting and dismounting nuts and stabilized between the splits of the pillow block housing. This labyrinth seal has a grease inlet centered on the seal to allow for purging contamination away from the bearing and creating a fresh grease dam; another barrier of protection. An end cover is also available to completely seal the bearing on one side of the housing.

- Q. Can a temperature monitoring device be used on the Hydraulic ISAF like the USAF product?
- A. Yes. The Hydraulic ISAF housing is manufactured to accept the same Dodge Smart Bearing features such as temperature and vibration monitoring devices as the USAF.
- Q. Why should I purchase a Dodge Hydraulic ISAF?
- A. First, the reduced installation time (15 to 20 minutes for a Hydraulic ISAF compared to 60-70 minutes for a USAF) will help get customers up and running quicker. Second, the ease of dismounting will allow customers to keep downtime to a minimum. Thirdly, the Hydraulic ISAF comes as a complete assembled unit. This helps eliminate the risk of contaminants entering the bearing during installation. Furthermore, the bearings are unitized, a preassembled unit, there are no loose parts that could accidentally be misplaced after the bearing is received. Additionally, these benefits are relived upon bearing replacement. The bearing insert will come completely assembled and will be ready for installation on the shaft right out of the box.

The above questions and answers reflect on how Dodge not only has designed and manufactured an easy mount and dismount bearing, but was also able to match dimensions and performance of existing USAF/USDAF bearings. Once again Dodge innovations have created a product that has passed the competition with the most important aspect in mind; the customer.

Visit the Dodge website to view an instructional installation video of the Dodge Hydraulic ISAF product.

For any additional questions, please contact Dodge C.O. Engineering at 864-284-5700 or email: [engineering@dodgeindustrial.com](mailto:engineering@dodgeindustrial.com)