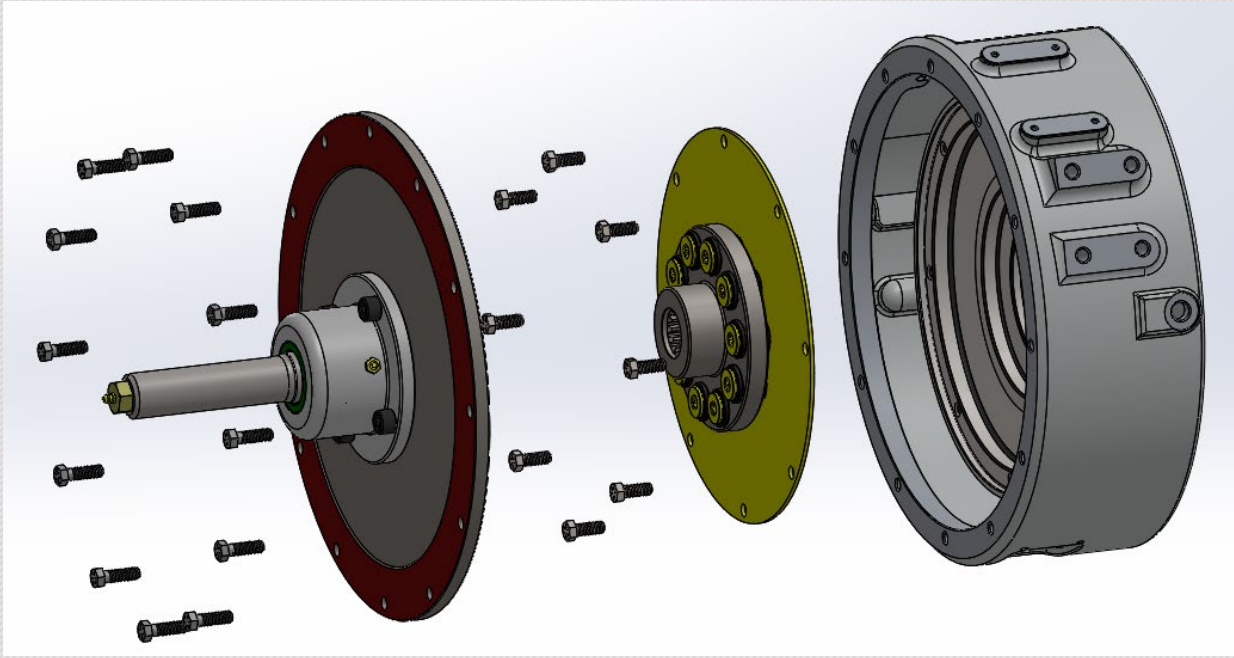
Hayes Original Bearing Supported Stub Shaft

Installation instructions

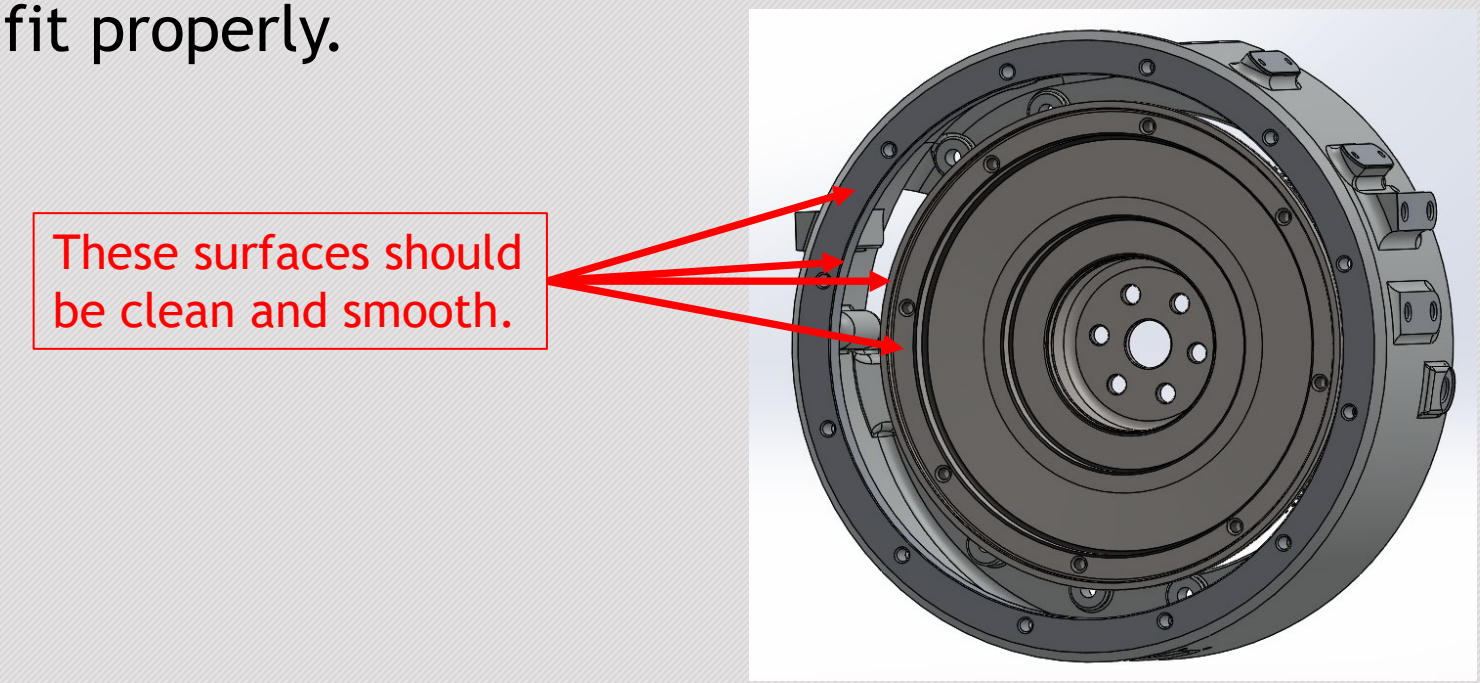
Installation Instructions

Thank you for purchasing the Hayes Original Bearing Supported Stub Shaft kit. The following will detail the installation of this kit to your engine. These are generic instructions meant to give an overview of the installation process. Any questions or additional needed information should be direct to Hayes Manufacturing or your distribution representative.



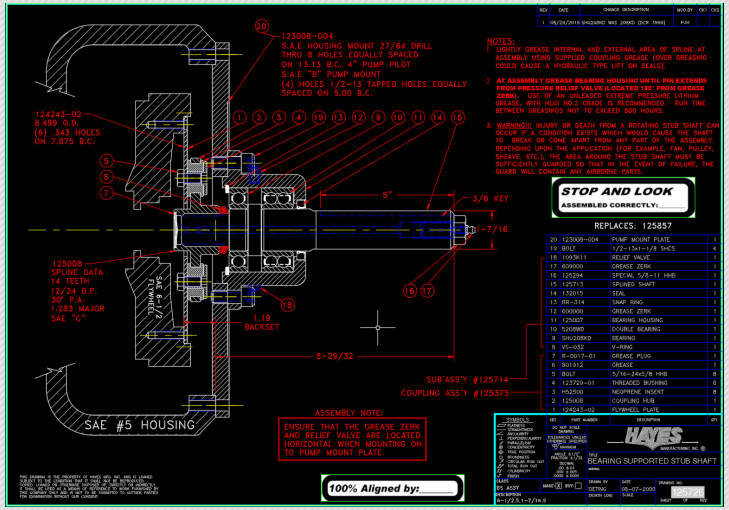
Engine Prep

It is important that the flywheel and housing of your engine are clean and free of paint, dirt, rust, dents, or nicks. A smooth clean surface will ensure that the flywheel coupling and housing adapter plate fit properly.



Unboxing your Stub shaft kit

Your Hayes Original Bearing Supported Stub Shaft has been packaged to minimize chances of damage during shipping. While unboxing be sure there are no missing parts. Please refer to assembly drawing pertaining to the kit to verify you have all components. If something is missing, contact your distribution representative or Hayes Manufacturing.

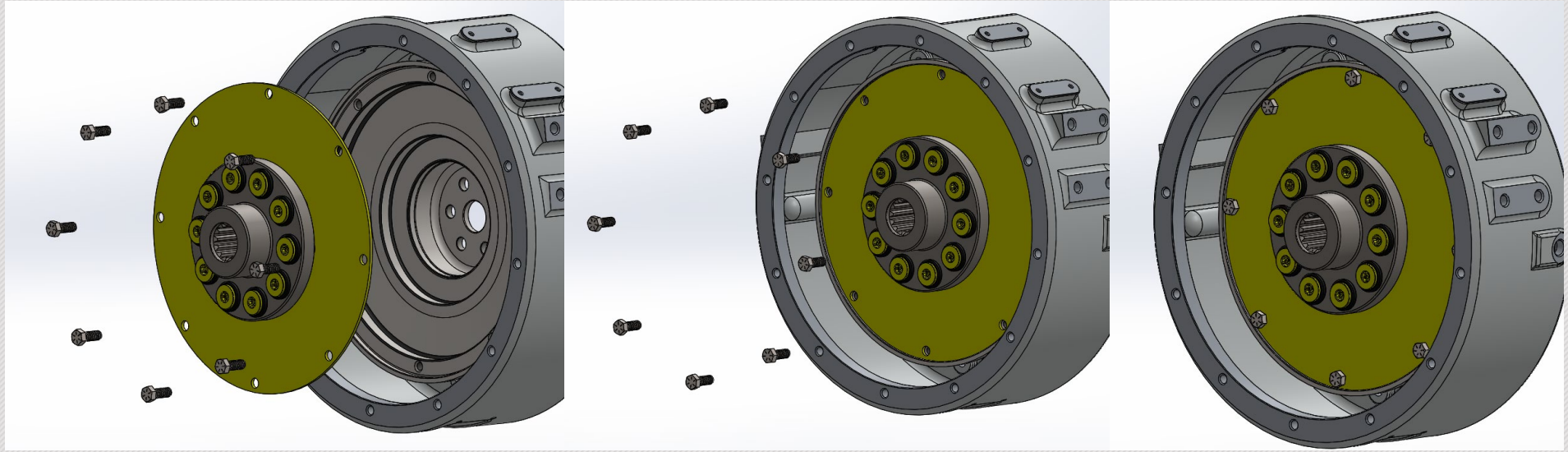


Installing the flywheel coupling

The flywheel coupling will be bolted to the flywheel of the engine. If your kit came with fasteners, use them, otherwise you will need to supply your own. For flywheel coupling mounting Hayes Manufacturing recommends grade 8 or class 10.9 fasteners or better. Hayes Manufacturing does not recommend the use of washers, flat or split locking, on the flywheel coupling. Hayes Manufacturing also recommends the use of red thread locker. All bolts are to be torqued to engine manufacturers specs, or to standard torque for grade and size of bolt used.

Installing the flywheel coupling

Place the flywheel coupling up against the flywheel mount. Be sure coupling fits flat against mounting surface. Align mounting holes in plate with tapped holes in flywheel. Apply thread locker to each bolt and thread into place. After all screws are installed, tighten to recommended torque.



Installing the stub shaft assembly

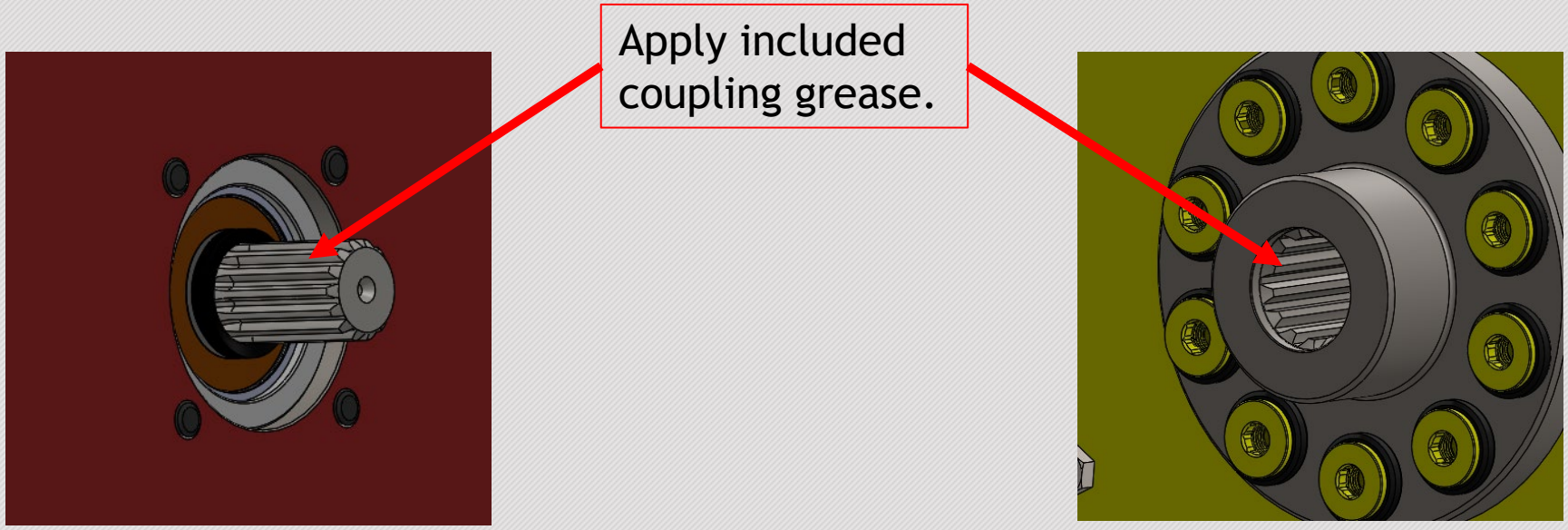
Caution!!! The stub shaft assembly can be heavy, be carful not to injure yourself or damage the assembly during installation. Use proper equipment to lift when necessary.

Installing the stub shaft assembly

The stub shaft assembly will be bolted to the housing of the engine. If your kit came with fasteners, use them, otherwise you will need to supply your own. For stub shaft assembly mounting Hayes Manufacturing recommends grade 5 or class 8.8 fasteners or better. Choice of washers and/or thread locker is up to user discretion. All bolts are to be torqued to engine manufacturers specs, or to standard torque for grade and size of bolt used.

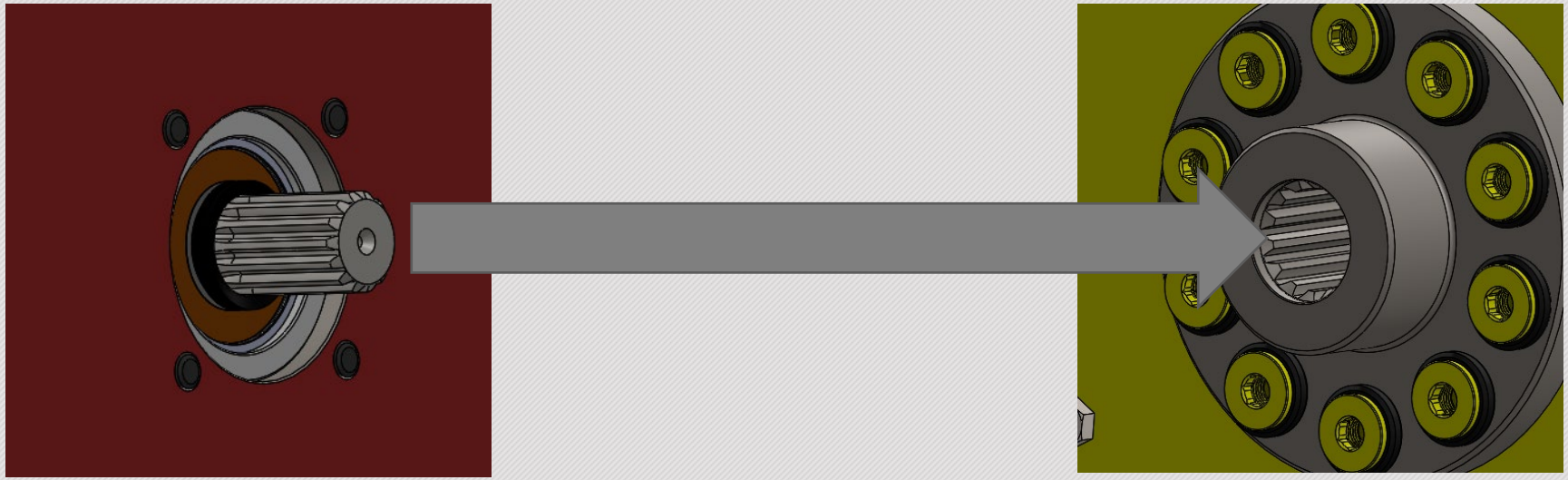
Installing the stub shaft assembly

Before installation, the coupling grease (provided with kit) must be applied to the internal and external splines. Take care to apply evenly and thoroughly.



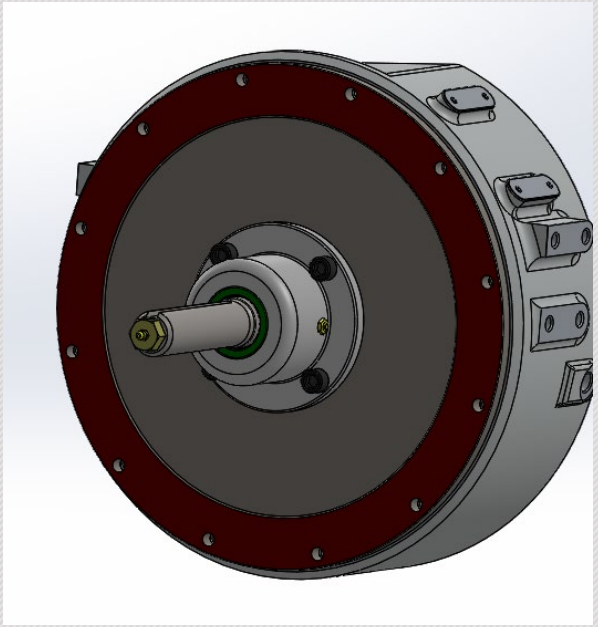
Installing the stub shaft assembly

Once stub shaft assembly is hoisted into position you must align the splines on the shaft with the internal splines in the flywheel coupling. This can sometimes be difficult as this is a precision fit between the two components.

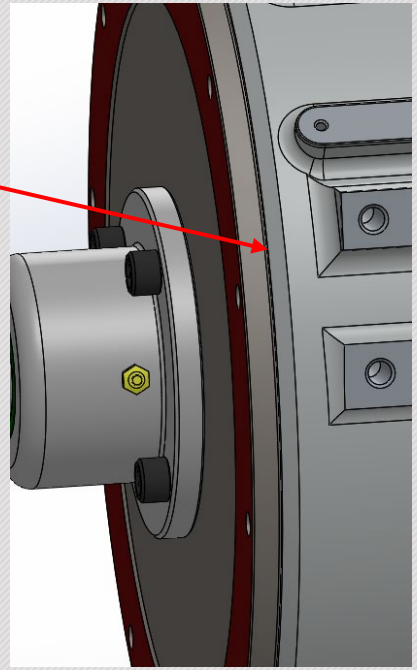


Installing the stub shaft assembly

Once the splines line up the stub shaft assembly will slide into place against the engine housing. Make sure that the housing adapter plate is completely seated against the engine housing.

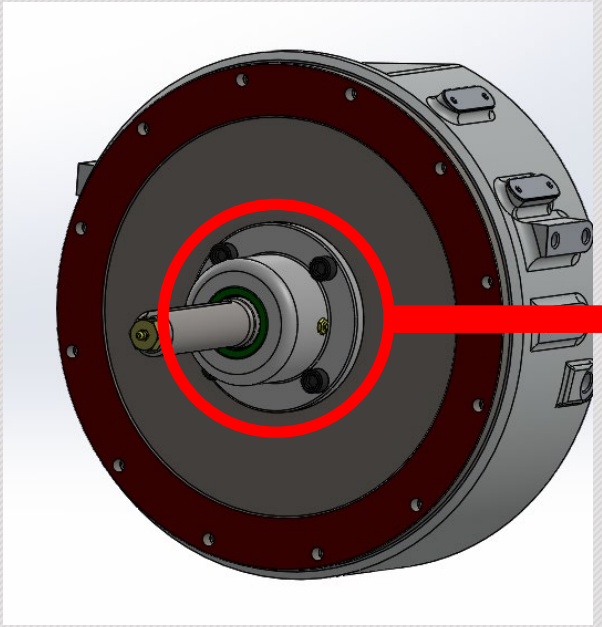


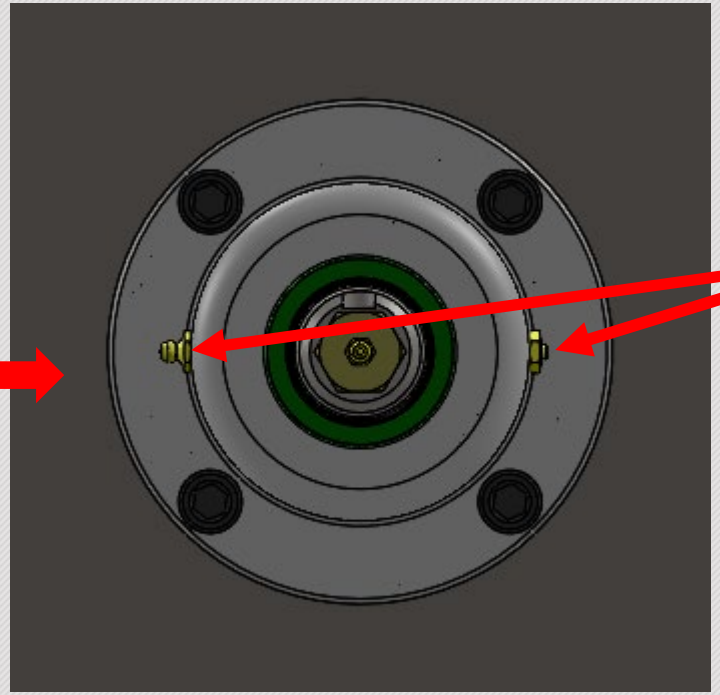
No Gap



Installing the stub shaft assembly

Rotate the stub shaft assembly until the grease fitting and breather are in a horizontal position. This is crucial to grease retention during operation.

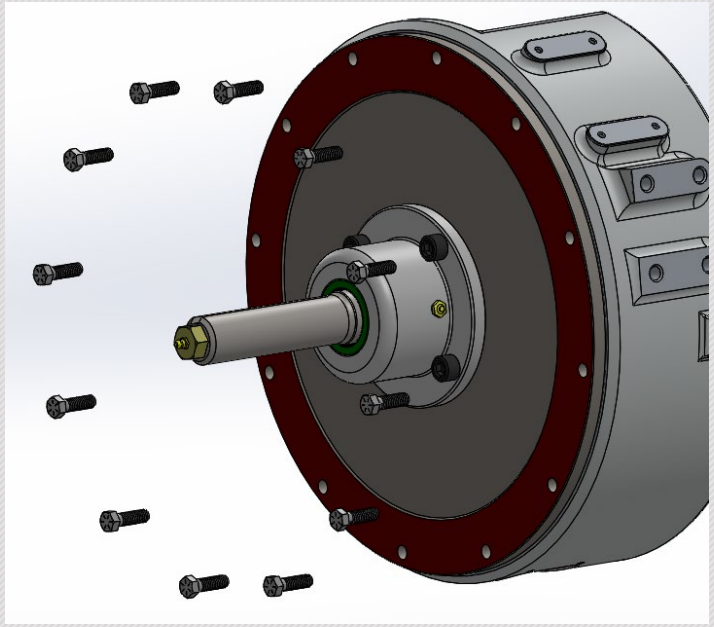


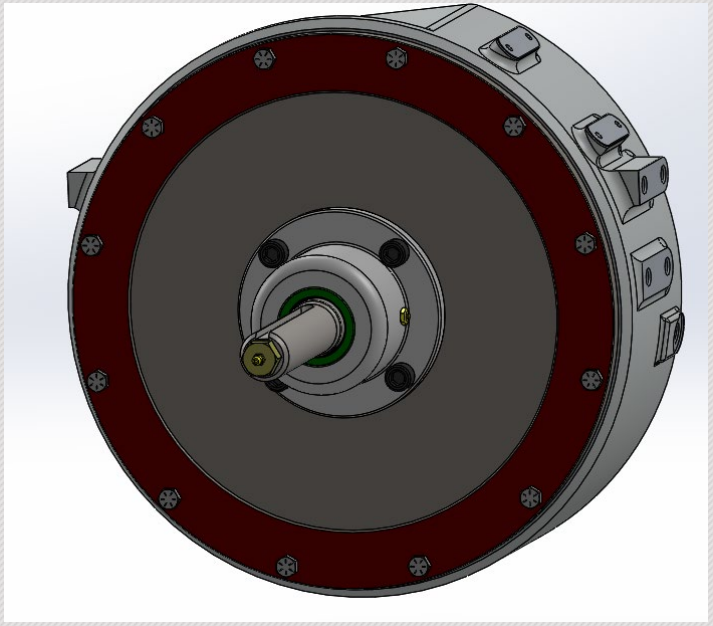


Must be mounted horizontaly!!

Installing the stub shaft assembly

If required apply thread locker and/or washers to screws and thread into engine housing. After all screws have been installed tighten to recommended torque.





Final notes

Congratulations!! You have successfully installed your Hayes Original Bearing Supported Stub Shaft kit. You may not attach your driven component and enjoy years of trouble-free operation!

Bearing housing comes grease from the factory. Grease should be applied at regular maintenance intervals. Take care not to over grease bearing housing as this could have an adverse effect on the bearing seals. Greasing of splined connection is achieved by way of grease fitting in end of stub shaft. See Service Section for details on service for your Hayes Original Bearing Supported Stub Shaft.

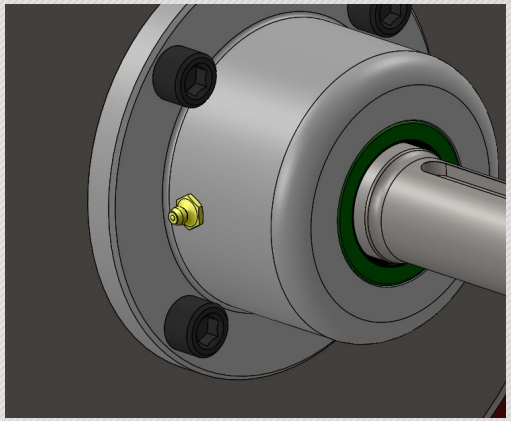
All stub shaft should be properly guarded to prevent injury. It is your responsibility to make sure all guarding is in place before operation.

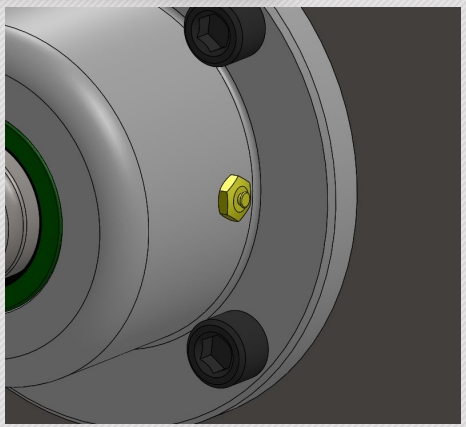
For any questions or concerns with your Hayes Original Bearing Supported Stub Shaft kit, consult your distribution representative or contact Hayes Manufacturing directly.

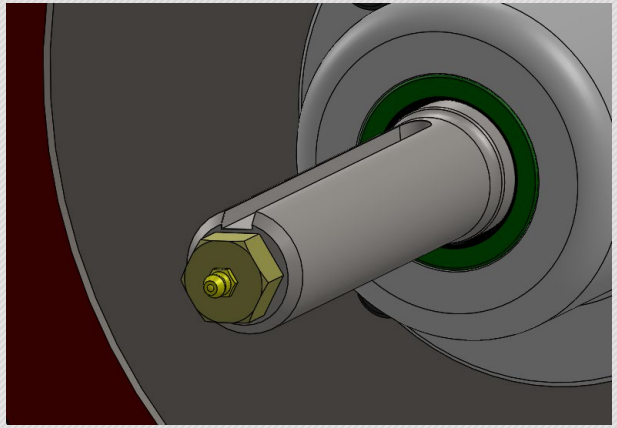
Service

Service maintenance is done by adding grease to bearing housing and spline connection by way of grease fittings. This maintenance should be performed at regular intervals. Failure to grease regularly and properly could cause failure of the Bearing Supported Stub Shaft unit or spline connection. This failure is not covered under warranty.

Guarding may need to be removed to access grease fittings. Any guarding that has been removed must be put back in place before operation of the machine. Consult with machine manufacturer for removal and installation instructions.







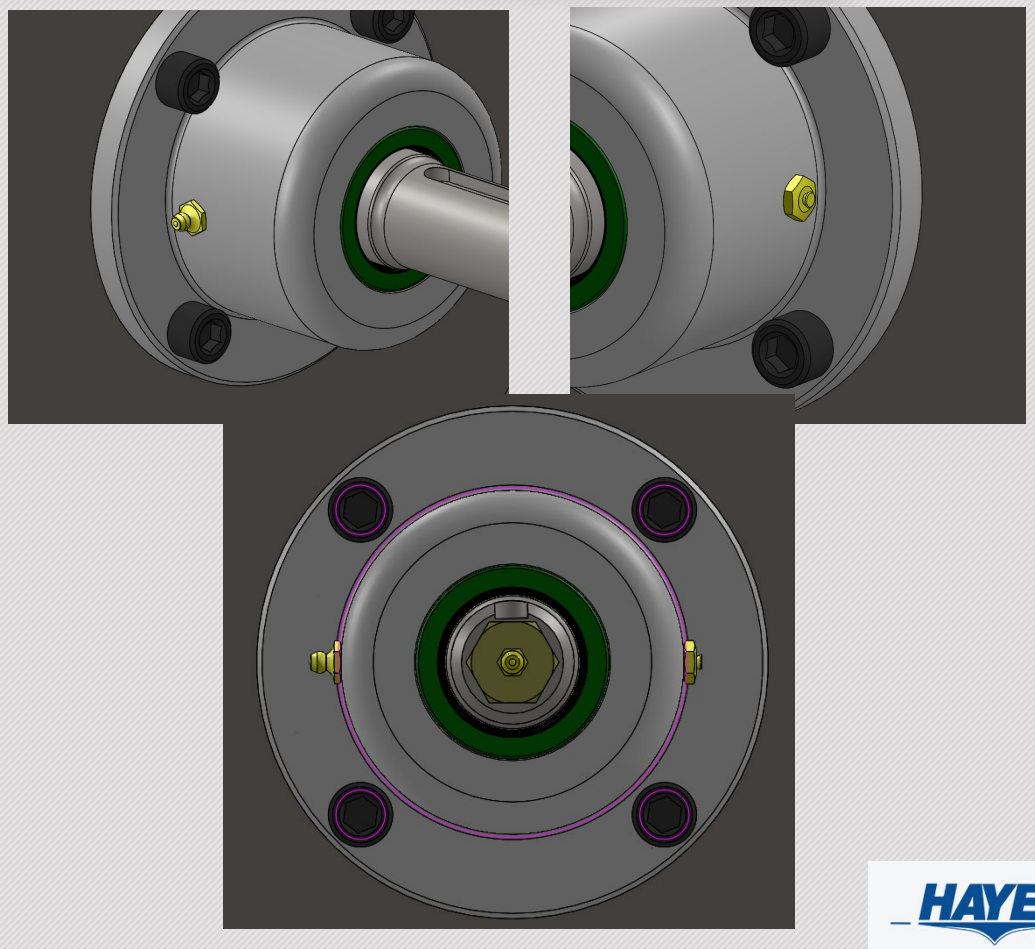
Service – Bearing Unit

In each side of the Bearing Supported Stub Shaft unit there are a grease fitting and relief valve. It is important that these remain horizontal to each other to help with grease retention during operation. If these are missing, damaged, or not horizontal consult with your distribution representative or Hayes Manufacturing.

An unleaded extreme pressure lithium grease with NLGI2 grade should be used for any maintenance to the bearing unit.

<u>Maintenance procedure</u>

Grease distribution amount is based on manual hand pump grease tooling. If air powered or other methods are used, you will need to evaluate the amount of grease being supplied.



Service – Bearing Unit

Maintenance Procedure

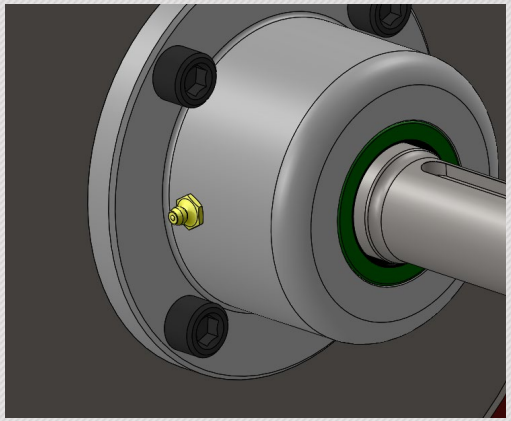
At 500 hr. Intervals:

Apply recommended grease to Bearing Supported Stub Shaft unit grease fitting.

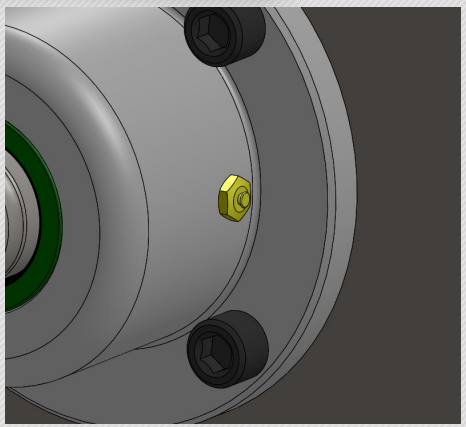
10-15 shots with manual hand pump.

Be careful not to over grease the bearing housing as this can cause damage to bearing seals. Relief valve pin should extend when housing is full.

Replace any guarding that has been removed.



Grease fitting



Relief Valve

Service – Bearing Unit

Maintenance Procedure

At 2000 hr. Intervals:

Remove relief valve and clean out any hardened grease.

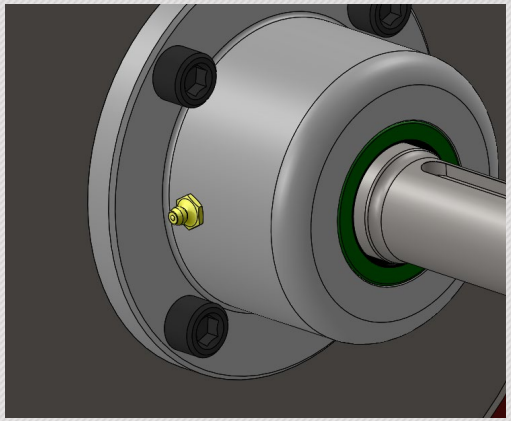
Clean out any hardened grease from tapped hole in bearing unit.

Apply recommended grease to grease fitting until grease comes out of relief valve tapped hole

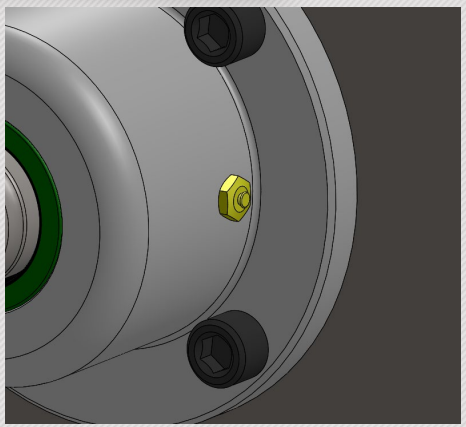
Reinstall relief valve in bearing housing and tighten in place. 120-180 in.lbs.

Do not over tighten relief valve as damage may occur.

Replace any guarding that has been removed.



Grease fitting

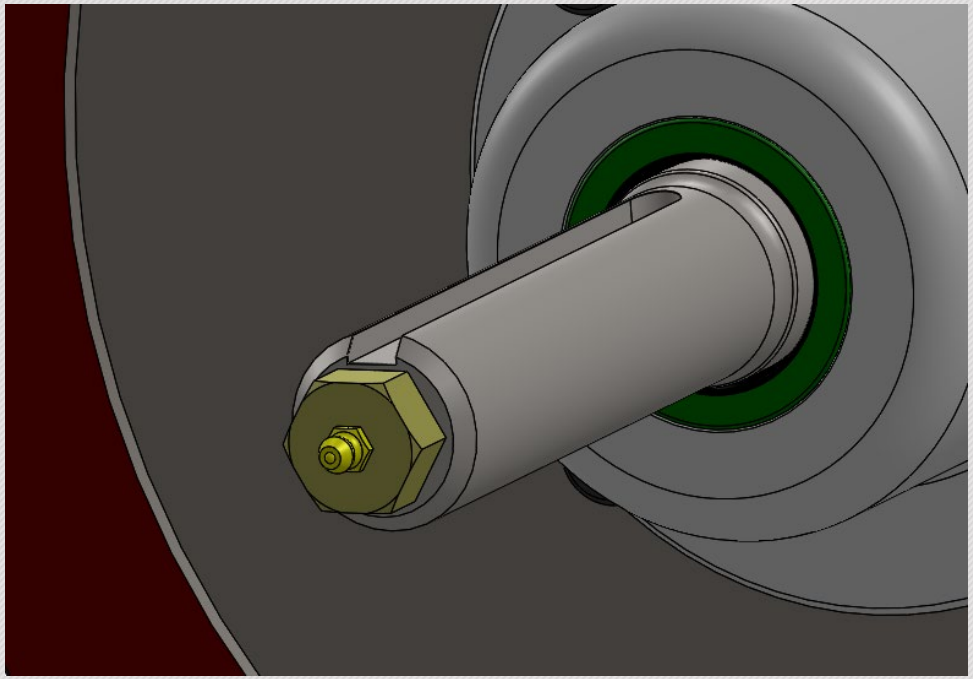


Relief Valve

Service – Splined Connection

In the end of the shaft is a grease fitting. This fitting is used to grease the splined connection between the flywheel coupling and shaft. It is important to keep this area lubricated to minimize spline wear. If this fitting is missing or damaged consult with your distribution representative or Hayes Manufacturing.

An unleaded extreme pressure lithium grease with NLGI2 grade should be used for any maintenance to the spline connection.



Maintenance procedure

Grease distribution amount is based on manual hand pump grease tooling. If air powered or other methods are used, you will need to evaluate the amount of grease being supplied.

Service – Splined Connection

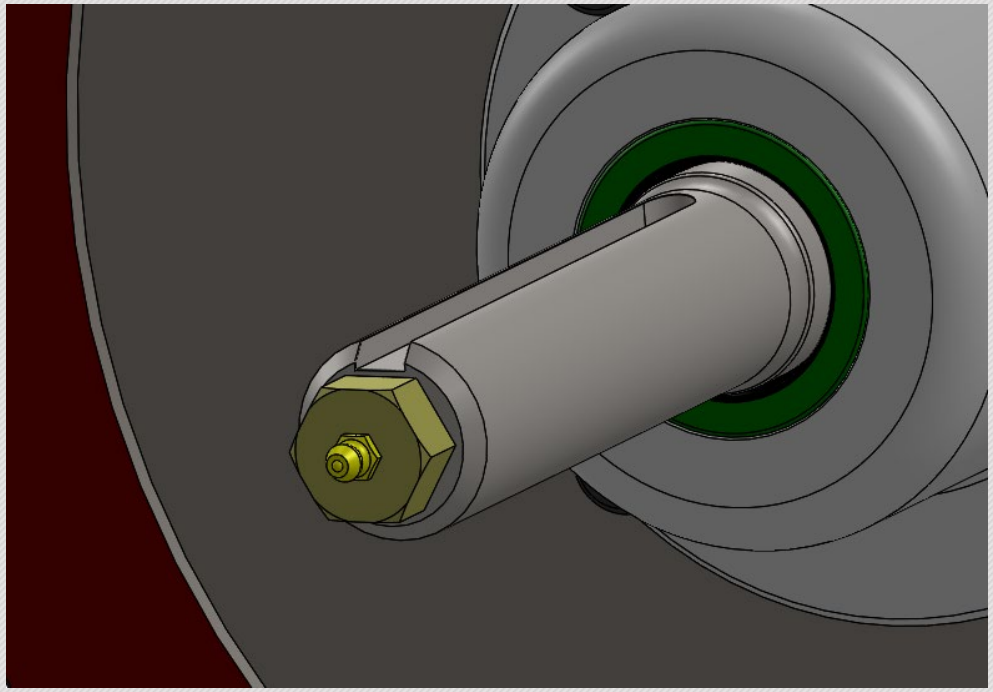
Maintenance procedure

At 500 hr. Intervals:

Apply recommended grease to fitting in end of shaft.

4 shots of grease with manual hand pump.

Replace any guarding that has been removed.



Shaft grease fitting