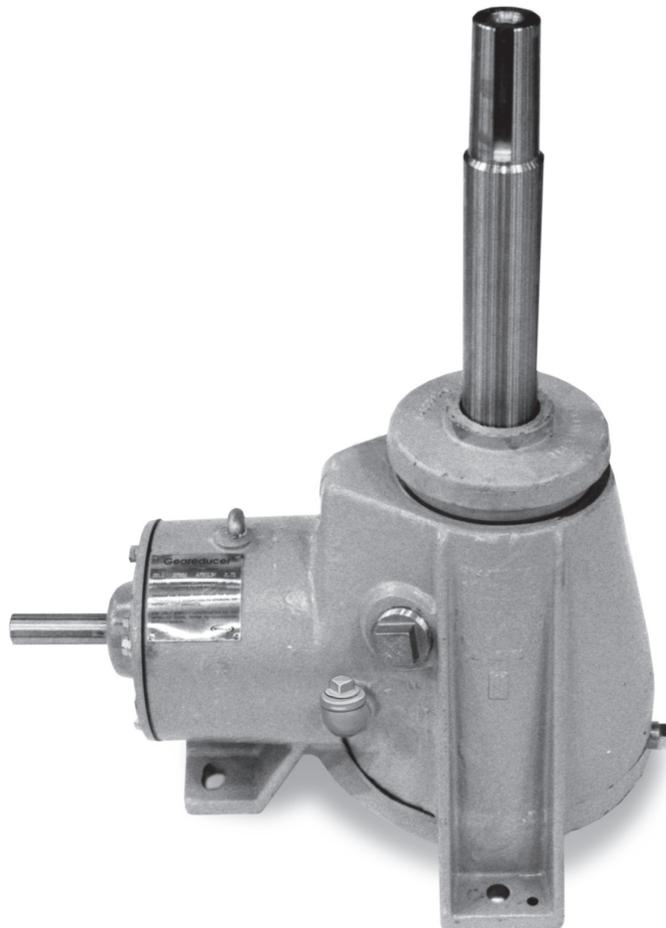


# 10.1 - 20.2 - 22.3 Series Geareducer<sup>®</sup>

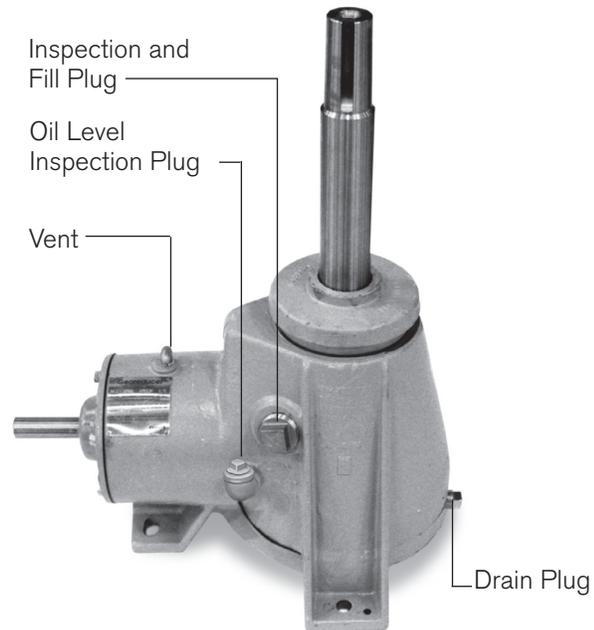
INSTALLATION - OPERATION - MAINTENANCE

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READ AND UNDERSTAND THIS MANUAL PRIOR TO OPERATING OR SERVICING THIS PRODUCT.







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**Figure 1**  
Service Fittings (20.1 shown)

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### **Protection Against Corrosion**

All Marley Geareducer® units ship from the factory with a protective coating of epoxy enamel paint on all unmachined parts and with rust-proofing oil and grease on machined surfaces. Machined surface coatings normally protect the Geareducer against atmospheric corrosion during storage periods for up to six months. However, if oil is added to the Geareducer, the new oil will dissolve the rust-proofing grease and require that the Geareducer be run once a week to keep a protective coating of oil on all interior machined surfaces.

Check Geareducer exterior yearly and touch up with epoxy paint if required. If your Geareducer is equipped with an oil gauge and drain line, coat any exposed threads at pipe joints to prevent corrosion.

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### **Alignment**

In order to assure long service life, the Geareducer and motor must be level, with the drive shaft or coupling properly aligned. Refer to the alignment instructions in the drive shaft or coupling User Manual (copies available from your Marley sales representative).

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## Initial Operation

Check to be sure that the Geareducer is filled with oil and that there are no visible oil leaks. If equipped with an external dipstick/oil level gauge, be sure the oil full mark corresponds with the full level at the Geareducer.

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### Note

***If this tower is equipped with a two-speed motor, allow a time delay of at least 20 seconds when switching from high speed to low speed. Allow a time delay of at least two minutes when changing direction of fan rotation. Failure to provide these delays may significantly reduce equipment service life.***

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## Scheduled Maintenance

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### ⚠ Warning

***Make certain that mechanical equipment is inoperable during periods of maintenance – or during any situation of possible endangerment to personnel. If your electrical system contains a disconnect switch, lock it out until the period of exposure to injury is over.***

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### Note

***These Geareducer models are designed for 5-year oil change intervals. To maintain five-year change intervals, use only Marley Gearlube™ designed specifically for these Geareducer models. If turbine-type mineral oil is used, the oil must be changed every six months. Marley Gearlube can be purchased through your local Marley sales representative.***

Turbine-type mineral oil must not contain any additives (such as detergents or EP additives) which are adversely affected by moisture and could reduce the service life of the Geareducer. The responsibility for use of lubricants other than Marley approved supplies rests with the customer/user and the lubricant supplier.

**Monthly**—Check Geareducer oil level. Shut down the unit and allow 5 minutes for the oil level to stabilize. Add oil if required, noting the addition in your maintenance log. If equipped with an external dipstick/oil level gauge, small quantities of oil can be added at that location.

**Semi-annually**—Check that all the assembly bolts and cap screws are tight, that oil plugs and pipe connections are in place and free from leaks, and that the vent on the Geareducer (and external dipstick/oil level gauge, if present) is clear—a clogged vent can lead to oil leaks. If using turbine-type mineral oil, change oil (see below for instructions).

**Annually**—Check mechanical equipment anchor bolts, drive shaft coupling bolts, and coupling set screws. Tighten as required.

**Every 5 Years**—Change the Geareducer oil by removing the drain plug. See Figure 1 for location. If equipped with an external dipstick/oil level gauge, remove the drain plug at that location, and drain the entire system. Clean the drain plug before reinstalling.

To maximize service life of the Geareducer, remove a sample from the drained oil and look for evidence of foreign material, such as water, metal shavings or sludge, or send the oil sample to an oil analysis lab for inspection. If you find unacceptable condensation or sludge, flush the Geareducer with mineral oil before refilling.

After inspection is complete, fill the Geareducer with Marley Gearlube. See Figure 1 for location. Be certain that the vent on the Geareducer (and external dipstick/oil level gauge, if present) is not plugged. Verify that the gauge/drain line is full and that there aren't any leaks at the connections.

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**Table 1**  
Oil Capacity

Geareducer Series	Oil Capacity
10.1	1 1/2 US quarts ( 1.42 l )
20.1-20.2	5 US quarts ( 4.73 l )
22.3	10 US quarts ( 9.46 l )

Maintenance Service	Monthly	Semi-annually	Seasonal Startup or Annually
<b>Geareducer Drive:</b>			
Inspect and tighten all fasteners including oil plug		<b>x</b>	<b>x</b>
Check for and repair oil leaks	<b>x</b>	<b>x</b>	<b>x</b>
Check oil level	<b>x</b>	<b>R</b>	<b>x</b>
Change oil		<b>R</b>	<b>R</b>
Make sure vent is open		<b>x</b>	<b>x</b>
Check driveshaft or coupling alignment			<b>x</b>
Inspect and tighten driveshaft or coupling fasteners			<b>x</b>
Check driveshaft or coupling bushing / flex elements for unusual wear			<b>x</b>
<b>Lube Lines (if equipped)</b>			
Check for oil leaks in hoses and fittings	<b>x</b>	<b>R</b>	<b>x</b>

**R** – Refer to instructions within this manual

Note: It is recommended at least weekly, that the general operation and condition be observed. Pay particular attention to any changes in sound or vibration that may signify a need for closer inspection.

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## Repair and Overhaul

If your Geareducer ever needs replacement or repair, SPX recommends returning the unit for service. A factory reconditioned Geareducer carries a one year warranty. Obtain a “Customer Return Material” tag from your Marley sales representative and attach the tag to the Geareducer for return.

Major repairs require the use of a fully equipped machine shop. If you decide to repair or overhaul your Geareducer, refer to the Geareducer Parts Manual and Field Repair Manual—copies available from your local Marley sales representative.



# Geareducer

USER MANUAL

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