



- 1) Drain oil from gear case.
- 2) **1200 Series with Brake:** Remove hydraulic motor, thrust spacer and bearing from gear case. Remove brake housing cover, brake components and brake housing. Remove bearing, spacer and worm shaft from gear case.  
**1200 Series without Brake:** Remove hydraulic motor, thrust spacer and bearing from gear case. Remove end cap. Remove bearing, spacer and worm shaft from gear case.
- 3) Remove gear case cover.
- 4) Remove bronze gear and shaft as a unit being careful not to damage shaft seal. **Note:** Bronze gear is press fit on shaft. **DO NOT** remove unless absolutely necessary.

Model number prefix (stamped in gear case cover) indicates model series and shaft size:

- Prefix "12" designates 1200 series with 1-1/2" shaft

## Assembly Instructions

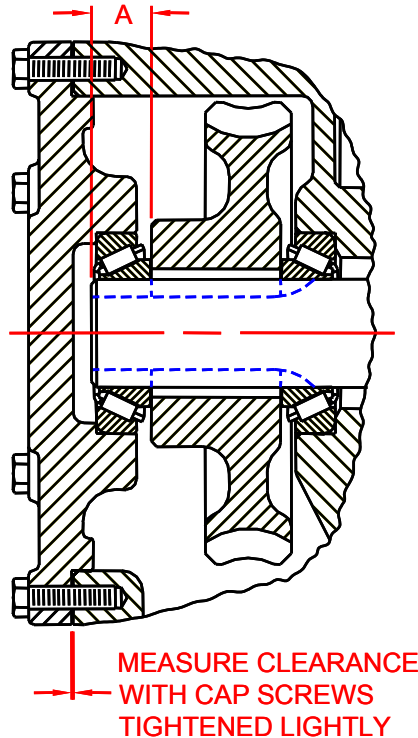
## 1200 Series Speed Reducers

- 1) Clean gear case and all parts thoroughly, inspect oil seal and replace if worn or scored.
- 2) If bronze gear has been removed from shaft, care should be used to press the gear onto the shaft squarely. Locate end of gear hub (the set screw side) 3/4" from the shaft end (Section A).

### Section A

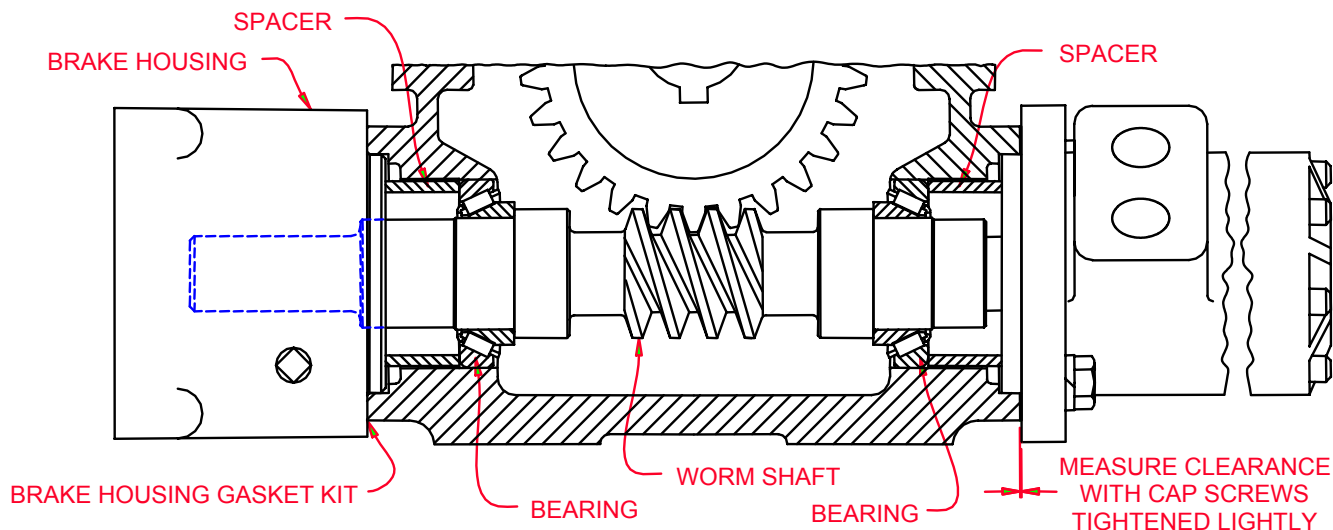
A DIM.	SHAFT DIA.
21/32	1-1/4
3/4	1-1/2

**Do Not  
Use Hammer  
To Install  
Bronze Gear  
Onto Shaft**



- 3) If removed install oil seal and bearings. Install gear & shaft assembly with bearings into gear case carefully to prevent damage to the shaft seal.
- 4) Bolt cover to gear case without shim gaskets. Tighten the screws lightly and evenly. Measure clearance with a feeler gage (Section A) and remove cover. For proper bearing pre-load, install shim gaskets (red - .002" blue - .005"; brown - .010") as required with a thickness that is .003" to .005" less than the measurement. Re-bolt cover securely.

## Section B



- 5) **1200 Series with Brake:** Install worm shaft in gear case. Install bearing cones such that the large end of each cone seats against each worm gear shoulder (Section B). Install bearing cups and thrust spacers. Spacer on brake side is 1.06" wide (*For your information: if motor is being replaced, the spacer on the motor side measures 1.06" wide if the motor pilot length is .25". The spacer measures 1.21" wide if the motor pilot length is .11"*). Install brake housing gasket kit (2) .010 brown gaskets) and brake housing using (4) 7/16" X 1" socket head cap screws.  
**1200 Series without Brake:** Install worm shaft in gear case. Install bearing cones such that the large end of each cone seats against each worm shoulder (Section B). Install bearing cups and thrust spacers. Spacer on end cap side is 1.06 wide. Install brake housing gasket kit (2) .010 brown gaskets) and end cap using (4) 7/16" X 1-1/2" socket head cap screws.
- 6) Bolt motor to gear case without shim gaskets with cap screws and lock washers. Tighten the screws lightly and evenly. Measure clearance with a feeler gage (Section B) and remove motor. For proper bearing pre-load, install shim gaskets (red - .002" blue - .005"; brown - .010") as required with a thickness that is .003" to .005" less than the measurement. Re-bolt motor securely.
- 7) **1200 Series with Brake:** Install parts into brake. See "Assembly Instructions - Oil Cooled Adjustable Automatic Safety Brake" page.
- 8) Remove pipe plug from top of brake housing and gear case.  
Base Mounted: Fill gear case with (2) pints (1200 w/o brake) or (3) pints (1200 with brake), All Other Mounting Positions: Fill gear case with (3) pints (1200 w/o brake) or (4) pints (1200 with brake) of Bloom ULLTRA-LUBE NO. 601 TRANS-WORM GEAR OIL; available from Bloom in pints or quarts. For emergency situations when Bloom ULLTRA-LUBE NO. 601 is not immediately available, use Phillips 66 Company SAE grade 80W90 superior multi-purpose gear oil (Phillips 80W90 SMP) meeting API classification GL-5 or equivalent brand. Continuous use of oil other than Bloom ULLTRA-LUBE NO. 601 or Phillips 80W90 SMP may shorten the life of the gears. **DO NOT** mix Bloom ULLTRA-LUBE NO. 601 or Phillips 80W90 SMP with more than 50% of any other kind of oil. Replace plugs when oil reaches top of brake housing.