



Refer to parts breakdown drawing

- 1) Drain oil from gear case.
- 2) Loosen and remove (6) 3/8"-16 UNC x 1" Socket Head Cap Screws (Ref. 20). Remove cover ( Ref. 13 ) from gear support ( Ref. 11 ).
- 3) **Without Brake**
  - a) Loosen and remove (2) 1/2" x 1-1/2" Socket Head Cap Screws (Ref. 1). Remove motor (Ref. 2) from gear box (Ref. 8).
- With Brake**
  - a) Loosen nut on hydraulic hose fitting ( Ref. 90 ).
  - b) Loosen and remove (2) 1/2" x 1-1/4" Socket Head Cap Screws (Ref. 1). Remove motor ( Ref. 2 ) from fail-safe brake ( Ref. 5 ).
  - c) Loosen and remove (2) 1/2" x 3/4" Socket Head Cap Screws (Ref. 1) Remove fail-safe brake ( Ref. 5 ) from planetary gear box ( Ref. 8 )
- 4) Loosen and remove (16) 3/8" - 24 NF x 1-3/4" HHCS (Ref. 22) and carefully remove planetary gear box ( Ref. 8 ) from gear support ( Ref. 11 ).
- 5) Remove retaining ring ( Ref. 12 ) from output shaft ( Ref. 24 ).
- 6) Remove output shaft (Ref. 24).
- 7) Remove ball bearings ( Ref. 10 ) from gear support ( Ref. 11 ).

## Assembly Instructions

## 2200 Series Speed Reducer

Refer to parts breakdown drawing

- 1) Clean gear case and all parts thoroughly, inspect all parts and replace if worn or scored.
- 2) Install ball bearings ( Ref. 10 ) into gear case ( Ref. 11 ).
- 3) Install output shaft ( Ref. 24 ) onto gear support and install retaining ring ( Ref. 12 ) onto output shaft ( Ref. 24 )
- 4) Use silicon ( form a gasket ) onto gear support ( planetary gear box side ) ( Ref. 11 ).  
Then carefully install planetary gear box ( Ref. 8 ) onto gear support ( Ref. 11 ) with (16) 3/8"-24NF x 1-3/4" Hex Head Cap Screws ( Ref. 22 ). ( being sure tighten the screws evenly)
- 5) If removed, install oil seal ( Ref. 15 ) onto cover ( Ref. 14 ).
- 6) Use silicon ( form a gasket ) onto gear support ( Ref. 11 ) ( gear support cover side ).  
Then install cover ( Ref. 13 ) onto gear support ( Ref. 11 ) with (6) 3/8"-16UNC x 1" Socket Head Cap Screws ( Ref. 20 ). ( being sure tighten the screws evenly).
- 7) **Without Brake**
  - a) Install motor ( Ref.2 ) onto gear box ( Ref. 5 ) with 1/2"-13UNC x 1-1/4" Gr. 5 SHCS & lock washers (Ref. 1).
- With Brake**
  - a) Use silicon ( form a gasket ) onto planetary gear box ( Ref. 8 ) then install fail-safe brake ( Ref. 5 ) onto planetary gear box with (2) 1/2"-13UNC x 3/4" Socket Head Cap Screws ( Ref. 7 ).
  - b) Install motor ( Ref.2 ) onto fail-safe brake ( Ref. 5 ) with 1/2"-13UNC x 1-1/4" Gr. 5 SHCS & lock washers.
  - c) If removed, align both ends of hydraulic tube ( Ref. 91 ) to the ports ( Ref. 90 ). Push hydraulic tube ( Ref. 91 ) into installed fitting body ( Ref. 90 ) on motor ( Ref. 2 ) and fail-safe brake ( Ref. 8 ) until it stops. Fasten nuts and tapered split rings to fittings. Turn nuts hand tight, then with wrench tighten one turn or until rear of tapered split ring is flush with the nut. Do Not Overtighten.
- 8) Fill gear box with (4) pints ( 1.4 liters ) Bloom ULLTRA-LUBE NO. 601 TRANS-WORM GEAR OIL.

# Bloom Manufacturing Inc.