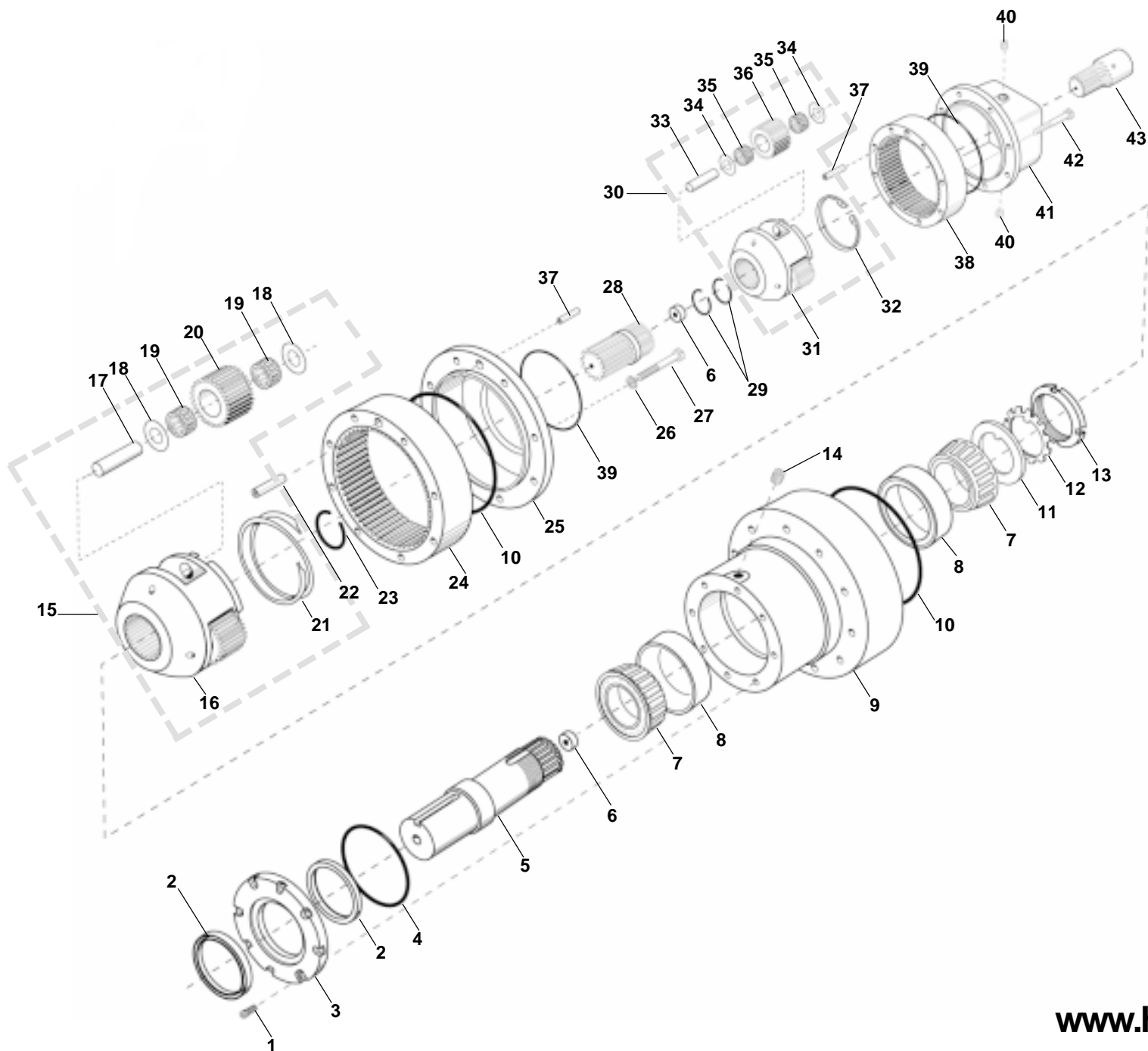
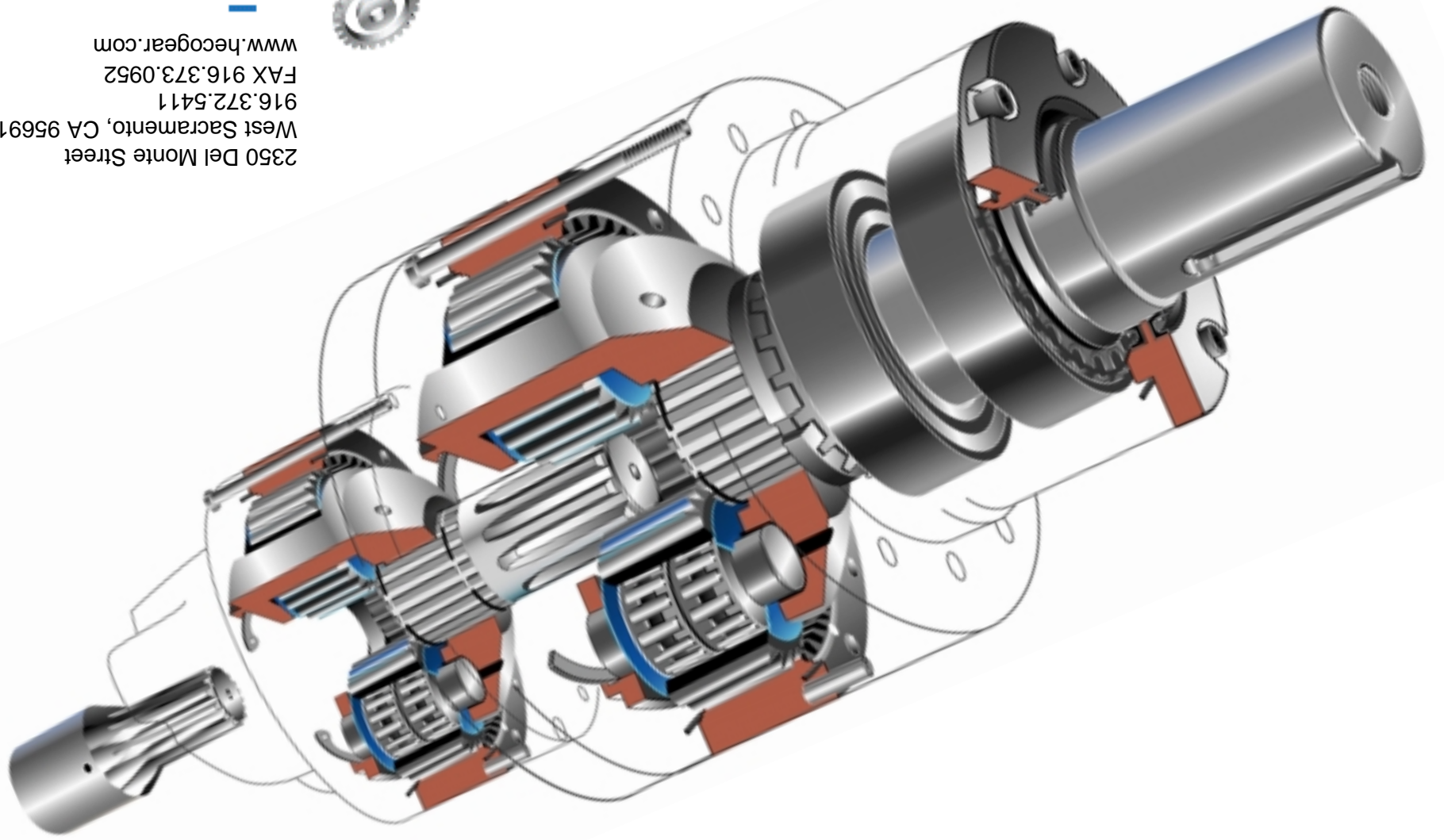


# Model 25 -- Revision 1

| ITEM # | PART # | DESCRIPTION                   | QTY/ASSY |
|--------|--------|-------------------------------|----------|
| 1.     | 15111  | Cap Screw                     | 8        |
| 2.     |        | Shaft Seals                   | 2        |
|        | 25109  | seal -- Viton                 |          |
|        | 25110  | seal -- Buna                  |          |
| 3.     | 25116  | Seal Carrier                  | 1        |
| 4.     |        | Seal Carrier O Ring           | 1        |
|        | 25132  | O Ring -- Buna                |          |
|        | 25133  | O Ring -- Viton               |          |
| 5.     |        | Output Shaft                  | 1        |
|        | 20021  | 3.375" Straight Keyed         |          |
|        | 20044  | 2.750" Straight Keyed         |          |
|        | 20053  | 8-Hole Flanged                |          |
|        | 20057A | 23-Tooth Splined              |          |
| 6.     | 150152 | Thrust Plug                   | 2        |
| 7.     | 25154  | Bearing Cone                  | 2        |
| 8.     | 25155  | Bearing Cup                   | 2        |
| 9.     |        | Front Housing                 | 1        |
|        | 25125  | 25CF Housing                  |          |
|        | 25156  | 25FF Housing                  |          |
|        | 25159  | 25AF Housing                  |          |
| 10.    |        | O Ring                        | 2        |
|        | 20101  | O Ring -- Buna                |          |
|        | 201015 | O Ring -- Viton               |          |
| 11.    | 20128  | Keyed Washer                  | 1        |
| 12.    | 20106  | Lock Washer                   | 1        |
| 13.    | 20107  | Lock Nut                      | 1        |
| 14.    | 20110  | Pipe Plug                     | 4        |
| 15.    |        | Planet Carrier Assembly       | 1        |
|        | 250004 | Planet Carrier Assembly 4:8.1 |          |
|        | 250006 | Planet Carrier Assembly 6.0:1 |          |
| 16.    | 25111  | Planet Carrier                | 1        |
| 17.    | 25112  | Planet Pin                    | 3        |
| 18.    | 25119  | Thrustwasher                  | 6        |
| 19.    | 25118  | Needle Bearing                | 6        |
| 20.    |        | Planet Gears                  | 3        |
|        | 25144  | Planet Gear 4.8:1             |          |
|        | 25146  | Planet Gear 6.0:1             |          |
| 21.    | 25114  | Retaining Ring                | 1        |
| 22.    | 25175  | Spring Pin                    | 1        |
| 23.    | 20011  | Retaining Ring                | 1        |
| 24.    |        | Ring Gear                     | 1        |
|        | 25145  | Ring Gear 4.8:1               |          |
|        | 25147  | Ring Gear 6:1                 |          |
| 25.    | 20030  | Transition Plate              | 1        |

| ITEM # | PART # | DESCRIPTION                        | QTY/ASSY |
|--------|--------|------------------------------------|----------|
| 26.    | 20108  | Lock Washer                        | 8        |
| 27.    | 20109  | Hex Bolt                           | 8        |
| 28.    |        | Intermediate Gear                  | 1        |
|        | 20033  | Intermediate Gear 24.96:1          |          |
|        | 20032  | Intermediate Gear 31.2:1           |          |
| 29.    | 15011  | Retaining Ring                     | 2        |
| 30.    | 15004Z | Planet Carrier Assembly            | 1        |
| 31.    | 15611  | Planet Carrier                     | 1        |
| 32.    | 15614  | Retaining Ring                     | 1        |
| 33.    | 15612  | Planet Pin                         | 3        |
| 34.    | 15112  | Thrustwasher                       | 6        |
| 35.    | 15115  | Planet Bearing                     | 6        |
| 36.    | 15006  | Planet Gear                        | 3        |
| 37.    | 15175  | Spring Pin                         | 2        |
| 38.    | 15003  | Internal Gear                      | 1        |
| 39.    |        | O Ring                             | 2        |
|        | 15102  | O Ring -- Buna                     |          |
|        | 151025 | O Ring -- Viton                    |          |
| 40.    | 15129  | Pipe Plug                          | 2        |
| 41.    |        | Motor Adapter                      | 1        |
|        | 15205  | SAE A 2-Bolt & 4-Bolt Combination  |          |
|        | 15064  | SAE B 2-Bolt                       |          |
|        | 15018  | SAE B 4-Bolt                       |          |
|        | 15209  | SAE C 2-Bolt & 4-Bolt Combination  |          |
| 42.    | 15110  | Bolt                               | 8        |
| 43.    |        | Sun Gear Kit (Input Shaft Adapter) | 1        |
|        | 16B    | 7/8" -- 13T Spline                 |          |
|        | 16C    | 1" -- 15T Spline                   |          |
|        | 16D    | 1" Straight Keyed                  |          |
|        | 16E    | Charlynn 2000 Bearingless          |          |
|        | 16F    | Charlynn 4000 Bearingless          |          |
|        | 16H    | 1 1/4" Straight Keyed              |          |
|        | 16I    | 1 1/4" -- 14T Spline               |          |
|        | 16M    | 1" SAE 6B Spline                   |          |
|        | 16O    | 7/8" Straight Keyed                |          |





## Parts and Lubrication Information

# Model 25D

## LUBRICATION INSTRUCTIONS

The HecoGear Inc. Model 25 planetary speed reducer may be lubricated using one of two methods.

### Self Contained Lubrication

If you are using self contained lubrication you need to install the proper amount of lubrication fluid into the speed reducer. The amount of fluid depends on the mounting orientation of the speed reducer.

### Model 25 Oil Capacity

|          |                |
|----------|----------------|
| 1/2 Full | 40 oz. (6 dl)  |
| Full     | 80 oz. (12 dl) |

### Recommended Lubricant

For maximum speed reducer life the recommended oil is SAE 85W-140 Multi-Grade gear oil, meeting API-GL5 and API-MT1 service. An alternate oil that will provide adequate speed reducer life is SAE 90W gear oil, meeting API-GL5 and API-MT1 service. These lubricants should be readily available at your local automotive store or oil distributor.

**Shaft horizontal** – it is recommended that the speed reducer be filled to ½ full.

**Vertical Shaft Down** – with the shaft facing down fill the speed reducer to the level of the centerline of the upper gear set prior to installing the motor.

**Vertical Shaft Up** – the speed reducer must be completely filled and provision for maintaining a fluid level at or above the top shaft bearing is required. This can be done using a “stand pipe” or small reservoir.

### “Flow Through” Lubrication

In this method of lubrication, fluid from the hydraulic system is used to lubricate the speed reducer. This is most commonly done using a “bearingless” hydraulic motor which has no shaft seal and the internal leakage of the motor flows into and lubricates the speed reducer. A petroleum based hydraulic fluid with EP1 additives and a minimum of .125% zinc anti-wear additives should be used to ensure good speed reducer life at rated torques and speeds. Bio-degradable fluids and water glycol fluids can be used below the maximum ratings of the speed reducer. (contact HecoGear for your specific application)

The speed reducer should be completely filled with hydraulic fluid before the hydraulic motor is installed.

**Case drains** – No case drain is required with self contained lubrication. On units with flow through lubrication you do not need to case drain the unit unless the return line pressure from the hydraulic motor exceeds 50 PSI; as it does if the motor is in series or you are using a “meter out” flow control.

The most popular hydraulic motors connected to the HecoGear speed reducer that provide a “Flow Through” lubrication are the Charlynn 2000 series and the 4000 series bearingless hydraulic motors. The correct location for the drain on these units is:

**C/L 2000 Bearingless** Connect case drain to the hydraulic motor

**C/L 4000 Bearingless** Connect case drain to the hydraulic motor or to the speed reducer

If a case drain is required for your application care must be taken to ensure that the drain is taken from the proper location so that all internal components are thoroughly lubricated. The case drain should be taken from the high point of the motor/reducer.

### Maximum Oil Temperature

160° Continuous

180° Intermittent

Consult HecoGear, Inc. for higher temperatures

### Periodic Maintenance

Reducers using self contained lubrication should have the fluid drained after the first 50 hours of operation and the reducer should be flushed with a flushing oil, drained and then replaced with the proper fluid. This should also be done every 1,000 hours thereafter. Reducers using flow through lubrication require no periodic maintenance.

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