SEW Gear Reducers

Service and Maintenance
Objectives

- Upon completion of this presentation, you will be able to accomplish the following –
  
  - Understand reducer nameplate information
  - Comprehend reducer mounting positions
  - Basic Service and Maintenance Principles
Nameplate Information

SEW Nameplates –

- Reducer nameplate contains Reducer Data
- Typically mounted on the reducer inspection cover
Nameplate Information

Motor Nameplates

- Type
- SO Number
- Mounting Position
- Lubrication

SEW-EURODRIVE INC. USA

Type R97DRE160MC4/TH

S.O. 890101043.14.13.001

Input rpm
Output rpm
HP
Ratio
Mounting
Lubricant

42
42.78
M6
ShellOmalaS2G220

Torque 22302 lb-in
S.F. 1.20
Min Amb -15 °C
Max Amb 40 °C

See Operating Instructions for lubrication details 99MN459X
Mounting Positions

There are six standard mounting positions for gear reducers –

- M1
- M2
- M3
- M4
- M5
- M6

M1 is the default mounting position
Mounting Positions – Shafts/Flanges

There are two locations for gear reducer shafts and flanges –

A is the default mounting position

Location based on view from motor/input end
Mounting Positions – Torque Arms

S – series Worm Bevel

Red denotes standard location per shaft position
Mounting Positions – Torque Arms

K – 7 series Helical Bevel
Mounting Positions – Torque Arms

K – 9 series Helical Bevel and Spiroplan® W gear units

Red denotes standard location per shaft position
Mounting Positions

- Mounting positions effect the following –
  - Oil quantity
  - Bearing lubrication
  - Breather location
  - Drain location
  - Oil level location
Mounting Positions – Oil Quantity

- SEW reducers typically ship with oil and the amount is based on the final mounting position.
- Installing a reducer filled with oil in a position different than the position listed on the name plate will result in reducer failure.

The reducer on the right will fail if the oil amount is not adjusted to reflect the new position.

Correct oil level is here for M4.
Mounting Positions – Bearing Lubrication

- If a unit is **not** built for M5 or M6 then it cannot be mounted in those positions due to the special construction of an included shield ring.

Shield ring required for M5A and M6B because oil level does not reach the bearing.
Mounting Positions – Breather Location

- Breathers are installed based on the following considerations –
  - Highest point of gear reducer
  - Furthest point from the oil level
  - Opposite side of output shaft (where possible)
Mounting Positions – Drain Location

- Drain plugs are installed based on the following considerations –
  - Lowest point of gear reducer
  - Opposite side of output shaft (where possible)
Mounting Positions – Oil Level Location

- Oil level plugs are installed based on the following considerations –
  - At the oil level
  - Opposite side of output shaft (where possible)
Maintenance – Breathers

- Breathers allow the internal pressure of the reducer to equalize with the external atmosphere
  - Always completely remove the rubber tab before placing the reducer into service
  - Leaks will occur if the rubber tab is not completely removed
Maintenance – Inspection

- Every 3,000 hours of operation, at least every 6 months
  - Check oil and oil level
  - Check running noise for possible bearing damage
  - Visual inspection of the seals for leakage
  - For gear units with a torque arm: Check and replace the rubber buffers, if necessary
Maintenance – Inspection

- Oil life

[1] Operating hours
[2] Sustained oil bath temperature
  - Average value per oil type at 70 °C
[3] CLP PG
[4] CLP HC / HCE
Maintenance – Inspection
Purchase of Lubricants

The following information outlines channels through which customers may purchase our standard lubricants. It is separated by vendor.

Shell:
Shell’s industrial lubricant website allows customers to find a local distributor based on zip code or state.

Fuchs:
Fuchs can be contacted directly through the information below. If the customer does not currently have an account with Fuchs they will still be able to make a purchase using a credit card.
Email: cassida@fuchs.com
Phone: +1 708 333 8900
Website: www.cassida-lubricants.com
Fax: +1 330 998 7052

Klüber:
Klüber can be contacted directly through the information below and will allow direct purchase. Klüber also has national agreements with many industrial supply houses such as Kaman, Applied, and Motion. Customers may be able to obtain some products locally through this network.
Klüber Lubrication North America L.P.
32 Industrial Drive
Londonderry, NH 03053
Phone:603-647-4104
Fax:603-647-4106
Email: info@us.kluber.com
Conclusion

By taking just a few moments you can head off any potential problems that could lead to expensive downtime and repairs.

For more details on the maintenance of your reducers please click on the following link –

Operating Instructions

To view our other maintenance of SEW mechanical products presentations, please click on the following link –

Maintenance Presentations