



Cone Drive

SERVICE

CENTER

DECADES OF GEARING EXPERIENCE

SINCE 1920

Gearbox Repair &
Upgrades

Reverse Engineering

Machining

Repair & Rebuild of
All Major Brands:

- Amarillo
- Browning
- Boston
- Cleveland
- David Brown
- Dresser
- Dodge/Reliance
- Falk
- Foote Jones
- Grove
- Horsburgh & Scott
- Kissling
- Link Belt
- Lightnin
- Nord
- Philadelphia
- Radicon
- Renold
- S.E.W. Eurodrive
- Sumitomo/Paramax/Hanson
- Winsmith
- Segment Gearing
- Fluid Drives

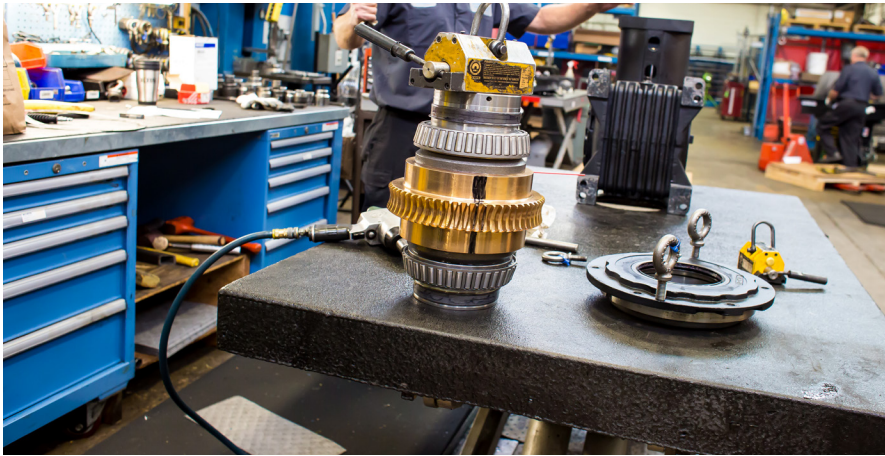


We have a long history of solving gearing problems.

What started out as simply servicing Cone Drive units for rebuilds and warranty issues soon became much more. It was clear that the market needed other manufacturers' units rebuilt quickly and efficiently. Cone Drive often found that they needed to apply reverse engineering as well as remanufacturing to many units to ensure that they were quality products.

The Traverse City Service Center was created to provide these services not only to Cone Drive customers, but also to customers of other manufacturers who were unable or unwilling to service their own products. The Cone Drive Service Center is able to service all market sectors from mining to power generation and renewable energy. All rebuilds are returned in "like new" condition and come with a warranty.

Whether you are interested in a partial or complete rebuild, extended service contract, or on-site service, we are ready to answer your call. The Cone Drive Service Center also provides complete reverse engineering, build, and inspection services, using the latest technology provided by the FARO Edge portable CMM.



Thorough, start-to-finish service is our standard.

We start by performing an on-site inspection with the most detailed reports in the industry. Then we develop a custom solution for your unique needs and follow through with responsive technical support.

conedriveservice.com

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SERVICES & CAPABILITIES

Whether you're interested in a partial or complete rebuild, extended or on-site service, we are ready to answer your call. Rebuild it with people who know it best. It doesn't matter if your gearbox is in service for 5 years or 25 years—we will rebuild it with Cone Drive–approved parts and workmanship.

90 years of gearbox design and assembly knowledge with 150,000 square feet of manufacturing support make Cone Drive the right choice for service. Our complete re-manufacturing facility is located in Northwestern Lower Michigan.

On-site Videoscope Inspection

Technical Assistance



Videoscope Inspection Service

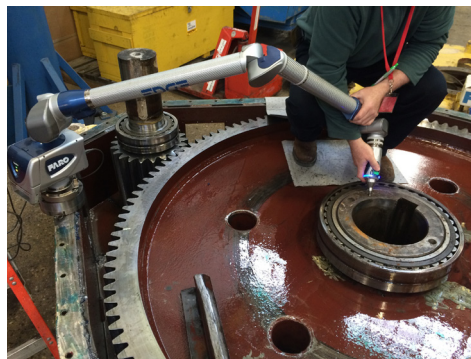
Our Olympus IPLEX Ultralite video-scope provides sharp live-image and clear movies for reliable observations and analysis. Images can be saved as high quality JPEG still photos and MPEG-4 movies.

Other Services

- Remanufacturing & Repair
- Preventive Maintenance
- Videoscope Inspection
- Spare Part Sales
- Reverse Engineering & Manufacturing

Field Service

Tear Down and Inspection Report



Custom-built Gearing

Cone Drive has the capabilities to custom build gearing to your special needs and application. Our Faro arm is state of the art in reverse engineering and inspection technology.



Remanufacturing

Our remanufacturing offers several service options, tear down inspection reports, and fast turnarounds.

The Cone Drive Inspection Advantage

Our On-site Inspection Reports are some of the most detailed in the industry. Cone Drive Service Technicians evaluate every reducer and present their findings in easy-to-understand charts so that you know how to prioritize repairs and replacements.

Technicians prepare Strip Reports with the same level of detail, reporting their findings in both words and pictures.

Cone Drive

240 E TWELFTH STREET PO BOX 272
TRAVERSE CITY, MI 49685

January 25th 2016 (Revised 2/1/16)



Strip and Inspection Report

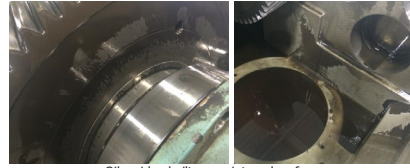
Case Number	Case 8497 /6427-4
Sequence number	4
Date of Strip & Inspect	1/25/16
Serial Number (Old)	B900210-01
Serial Number (New)	16585300-400-1
Make / Brand of Gearbox	David Brown Series G
Model / Size of Gearbox	G1720-VA
Handing	Vertical input shaft up, vertical down output shaft
Ratio	18.463/1
Direction of Rotation (Input)	N/A

Cone Drive Operations, Inc.
240 E 12th Street | PO Box 272 | Traverse City, MI 49685 | T 231-946-8410 | F 231-933-8600

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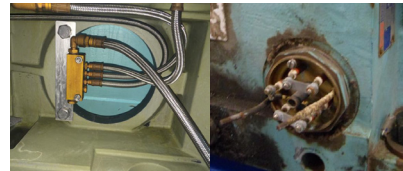
The covers were removed and housing split in half to gain access to the internal gearing and components. The internal condition of the housing was satisfactory. Relatively thick oil residue/sludge was built up on most all internal surfaces, but no metallic content was seen.



Oil residue built up on internal surfaces

The lubrication pump was one of the new models supplied by Cone Drive last year and will be fit for reuse. The manifold and internal pipe work appeared in satisfactory condition, there was very little oil residue buildup and the manifold was still securely fastened to its brackets.

The immersion heater was slightly damaged/deformed



Manifold and Immersion Heater condition

The housing appears in good shape, no rust or damage was found. Bore were all in satisfactory condition with only a minor witness mark from the bearings. However extensive cleaning will be required to remove all oil/sludge build up.

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Detailed reports by our technicians illustrate our thorough evaluation of your equipment.

Cone Drive Strip Inspection Reports ▲

Cone Drive On-site Inspection Reports ▼

THE MOST DETAILED REPORTS IN THE INDUSTRY

Cone Drive

240 E TWELFTH STREET PO BOX 272
TRAVERSE CITY, MI 49685

Reducer Designation	B-1
Manufacturer	Link Belt List states Jones
Type of reducer	Herringbone 2 stage reduction.
Model/Frame #	D1051.7-18.23-8.60L
Serial Number	
Hand of Assembly	Inline , Sgl Ext input, Sgl Ext output
Input speed	1750 rpm
Ratio	18.23:1



Recommend:

- Very poor input pinion condition, tooth surface begun to break away. This gear and its mating wheel should be replaced during next PM.
- The second reduction gearset has significant wear and recommend replacement
- Oil leaks on input and output seals. Inspection cover leaking badly requires sealing

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Reducer Designation	Manufacturer	Model/Frame #	Serial Number	Input Speed	Ratio	Condition	Notes	Date
E-4	Jack Shaft Reducer	Spur	8	10	80.0%	Viewed with bore scope only		19-Sep
F-2	Falk	10DA	20	35	57.1%	Housing joint leaking. Average wear		19-Sep
F-3	Falk	108D YFI A	16	30	53.3%	Change oil and housing in poor condition		19-Sep
F-4	Foot Bros	255L	21	35	60.0%	Top up oil level and seal breather		19-Sep
G-1	Falk	6DA	12	20	60.0%	Heavy pitting in all gear teeth		11-Sep
G-2	Falk	RK2050F-2A	7	10	70.0%	Viewed with bore scope only		11-Sep
G-3	Falk	110 YZA	28	35	80.0%	Good condition but additive reported to have been put in oil?		19-Sep
H-1	Falk	5DA	12	20	60.0%	Scuffing and pitting on gear teeth		11-Sep
H-2	Falk	6DA	10	25	60.0%	Worst box found gear teeth near failure		11-Sep
J-2	Jones	HLD 1402	29	40	72.5%	Clean oil troughs - blocking tube to brgs		21-Nov
J-3	Jones	135 SHC	19	30	63.3%	Gears fair condition. Leaking carriers and seals		7-Nov
J-4	Jones	210 DHC TBW 1150B (No Tag)	25	35	71.4%	Fair Condition. No major issues		7-Nov
J-5	Jones	110 YZA	45	50	90.0%	Good condition but change oil		7-Nov
L-10	Link-Belt	BS1300	14	25	56.0%	Poor oil condition - Water in oil		19-Sep
L-11	Link-Belt	BS1300	17	24	70.8%	Change oil		19-Sep
L-2	Falk	12D	13	25	52.0%	Gear condition poor		11-Sep
L-3	Falk	12D 106	17	30	56.7%	Gear condition poor		11-Sep
L-5	Jones	180BH	14	20	70.0%	Bevels fair cond. Wear on 2nd Reduction		11-Sep
L-6	Jones	124TBH	23	30	76.7%	Bevels fair cond. Wear on 2nd & Reductions		11-Sep
L-7	Jones	127D	18	30	60.0%	Pinions are poor. Gears fair		11-Sep
L-8	Jones	1503 HLD	21	40	52.5%	Heavy wear on all gears and large amount of metal in oil		11-Sep
L-9 (1 of 2)	Jones	24D	13	25	52.0%	Heavy wear on all gears and large amount of metal in oil		11-Sep
L-9 (2 of 2)	Link-Belt	BD4500	12	20	60.0%	Gear condition poor		11-Sep
N-1	Jones	379974	17	25	68.0%	Wear on all gears		11-Sep
N-10	Westinghouse	DHR 28	20	35	57.1%	Poor oil condition		30-Oct
N-11	Westinghouse	DHR 20	19.5	35	55.7%	Metal in oil & Bad oil leaks		30-Oct
N-2	Radicon	G1430	29	30	96.7%	Unit in great condition but water in oil		11-Sep
N-5 (1 of 2)	Falk	11DE	31	35	88.6%	Recently rebuilt		30-Oct
N-5 (2 of 2)	Falk	11DE	29	35	82.9%	Recently rebuilt - Pri Gears only		30-Oct
N-8	Falk	12DE	22.5	35	64.3%	2nd Reduction gears poor condition Unit runs hot suspect bearing issue.		30-Oct
NT-1	Jones	29D	24	35	68.6%	Bad leaks from carriers		13-Oct
NT-2	Jones	HLD 1102	29	40	72.5%	2nd Reduction gears poor condition		30-Oct
P-2	Jones	165 SHC	20	35	57.1%	Bad Pitting in drive flanks		30-Oct
P-3	David Brown Radicon	G2130	45	50	90.0%	Overall great condition unknown age		30-Oct
P-4	Jones	210 SHC	16	25	64.0%	Pinion Bearing out of position slipped on shaft		30-Oct

On-site Inspections include a highly detailed analysis of every reducer and a summary report highlighting critical problem areas as well as areas of lesser concern.

MINING



WHERE CONE DRIVE FITS

- Shovel & Dragline Gear Units
- Hoist Drives
- Slew Drives
- Pump Drives
- Bucket Wheel Drives
- Conveyor Drives
- Mill Drives
- Barring Drives
- Pinion Gears
- Girth Gears
- Agitator/Mixer Gears
- Kiln Drives
- Crusher Drives
- High Wall Miner Drives
- Segment Gears
- Fluid Drives





WHERE CONE DRIVE FITS

- Cooling Towers
- Conveyors
- Coal Pulverizers
- Air Preheaters



AUTOMOTIVE



WHERE CONE DRIVE FITS

- Conveyors
- CNC Index Drives
- Cooling Towers
- Servo Drives





WHERE CONE DRIVE FITS

- Dock Loaders
- Unloaders
- Winches



SKI RESORTS



WHERE CONE DRIVE FITS

- Ski Lift Reducers
- Gondola Reducers
- Rope Tows
- Magic Carpets
- Fluid Drives





WHERE CONE DRIVE FITS

- Debarkers
- Chippers
- Mixers
- Screw Conveyors
- Cooling Towers
- Crane Drives
- Pulpers
- Roll Pack Drives

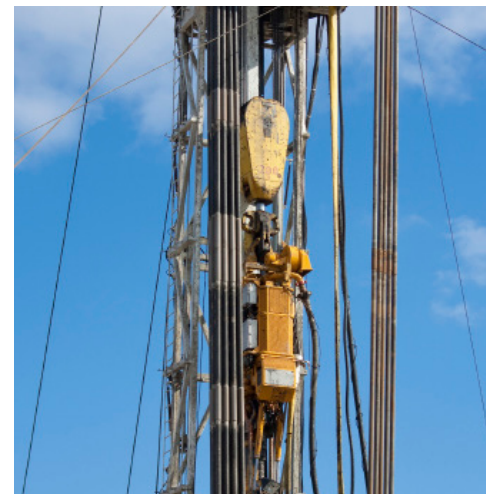


OIL & GAS



WHERE CONE DRIVE FITS

- Mud/Frac Pumps
- Draw Works
- Top Drives
- Rotary Tables
- Crane Slew & Winch Gears
- Jack Up Rigs
- Winches
- Process Pump Reducers





WHERE CONE DRIVE FITS

- Mixer Drives
- Vibrating Table Drives
- Screw Conveyor Drives
- Belt Conveyor Drives
- Extruder Drives
- Bottling Drives



LUMBER MILLS



WHERE CONE DRIVE FITS

- Debarker Drives
- In-feed Drives
- Out-feed Drives
- Conveyors
- Chipper Drives
- Step Feeders





WHERE CONE DRIVE FITS

- Conveyor Drives, Stackers/ Reclaimers
- Pelletiser Drives, Girth Gears, Primary Drives
- Kiln Drive: Girth Gears, Primary Drives, Center Drives
- Main Ladle Hoist, Overhead Crane Drives
- Worm Units for Straightening
- Roller Stand Drives
- Mill Stands: Combined Reduction Pinion, Screw Down For Roller Positioning, Flying Shears
- Reheater: Roller Table Conveyor Drives
- Tube Mill Drives: Levellers, Roller Table Conveyors Drives, Pinch Rolls
- Accumulators: Winch Drives
- Edgers, Levellers, Roller Table Conveyor Drives, Coilers and Uncoilers
- Mill Drives, Roller Tables Conveyor Drive, Coilers and Uncoilers
- Segment Gearing



PLASTICS



WHERE CONE DRIVE FITS

- Extruder Drive



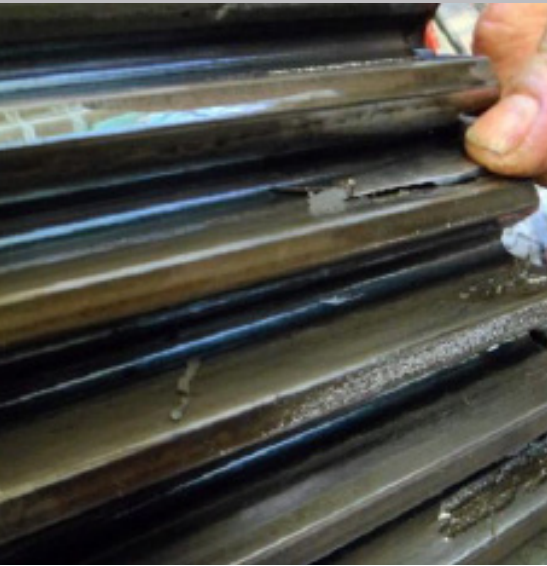


WHERE CONE DRIVE FITS

- Jet Bridge Drive
- Luggage Conveyor Drive
- Escalator Drive



REBUILD WITH CONE DRIVE



BENEFITS AFTER REBUILD

- 3-year warranty
- New life from an old drive
- Qualified service technicians
- Like-new condition on return
- Cone Drive quality
- Better service life

It is becoming more and more difficult to get quality service and parts for many older reducers produced by overseas manufacturers. So what do you do when it requires maintenance or rebuild? The Service Center has the technology and expertise to bring your old reducer back to life.

Cone Drive can retrofit your Radicon, Renold, or Flender reducer among others and bring it back to life. We can replace other manufacturers' gearing with our double-enveloping worm gear, and help the service life of your drive. Many sizes, 4-inch center distance and above, are available now for quick rebuild.



Cone Drive Is a Leader in Double-Enveloping Gear Technology

Double-enveloping worm gearing provides several distinct advantages over cylindrical worm gearing, including increased torque throughput, improved accuracy, and extended life.

The concept of worm gearing originated in antiquity. Archimedes is generally acknowledged as the inventor of the worm gear, using a screw to rotate a toothed wheel. Leonardo Da Vinci envisioned the double-enveloping worm gear nearly 500 years ago. Although Da Vinci came up with the concept, it was Samuel Cone who developed efficient techniques to manufacture the double-enveloping worm gear in the 1920s.

LEARN MORE:
conedrive.com/Explore-Cone-Drive/double-enveloping-technology.php

Our customers say it best.

“Thanks very much for your help evaluating and repairing our speed reducer. We reinstalled the reducer yesterday and the machine runs like new. We're so fortunate to have you and your company's world class capabilities right here in Traverse City. It was a pleasure to work with you.”

—Dave Houseman
Lead Screws Int'l., Inc., Traverse City, Michigan

“It was refreshing to spend time with a true craftsman. The crew was energized by your visit and spoke highly to everyone about it.”

—Henry Endris
Bridgestone Firestone, Morrison, Tennessee

Rebuilt Equipment Looks and Functions Like New



Contact our Service Center today to learn more about how we can improve your efficiency.

888.726.2663
servicecenter@conedrive.com

The Cone Drive Service Center has experience solving the toughest gearbox problems. Let us help you solve yours.



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GLOBAL LOCATIONS



Contact us today for a quote or an on-site service call.

SERVICE CENTER

T: 888.726.2663

E: servicecenter@conedrive.com

T: +1 888 994 2663

E: orders@conedrive.com

W: www.conedrive.com