HYDRAULIC WINCH
15JDXX4L1H-006

SERIAL NUMBER: _______________________________ DATE: ________________

dp
WINCH

11135 S. James Ave.
Jenks, OK  74037
Phone: (918) 298-8300
Fax: (918) 298-8301

Rev -7
06/2019

GEARING AND ELECTRONIC SOLUTIONS
TABLE OF CONTENTS

WARNING AND CAUTION NOTICES - READ BEFORE OPERATING PRODUCT
OPERATING PROCEDURE FOR SHIFTING GEARS
DIMENSIONAL – 15JDXX4L1H-006
WIRE ROPE INSTALLATION
HYDRAULIC SYSTEM
GENERAL INFORMATION AND DP SERVICING INSTRUCTIONS

INSTALLATION DRAWING - MOTOR END - EXPLODED VIEW
PARTS LIST – MOTOR END.................................................................1.10523

INSTALLATION DRAWING - DRUM - EXPLODED VIEW
PARTS LIST - DRUM.................................................................1.20190

INSTALLATION DRAWING - GEAR END - EXPLODED VIEW
PARTS LIST - GEAR END.................................................................1.30185

INSTALLATION DRAWING - INPUT SHAFT - EXPLODED VIEW
PARTS LIST - INPUT SHAFT.................................................................1.40298

INSTALLATION DRAWING - BASE MOUNT - EXPLODED VIEW
PARTS LIST - BASE MOUNT.................................................................5.50269

INSTALLATION DRAWING - GEAR END COVER - EXPLODED VIEW
PARTS LIST - GEAR END COVER.................................................................1.60174

PARTS LIST – SEAL KIT.................................................................55311

BOLT TORQUE CHART
WINCH/GEAR BOX LUBRICATION
GENERAL INFORMATION
REPAIR & REPLACEMENT PARTS ORDERING INFORMATION
DP WINCH LIMITED WARRANTY
GENERAL WARNING SHEET
Review entire manual before installation or operation of winch.

DANGER
Do not disengage gear box while winch is under load. Immediate loss of load control will result.

DANGER
The last five wraps of wire rope must be left on the drum to assist the wire rope clamp in holding the load.

DANGER
Winches are not to be used for the lifting or moving of persons.

WARNING
Failure to adequately align, support, or attach winch to a suitable mounting base could result in a loss of efficiency or premature failure of winch, wire rope, or mounting base.

WARNING
Rope WILL FAIL if worn-out, overloaded, misused, damaged, improperly maintained or abused. Rope failure may cause serious injury or death!
Protect yourself and others:
- ALWAYS INSPECT rope for WEAR, DAMAGE OR abuse before use.
- NEVER USE wire rope that is WORN-OUT, DAMAGED, or ABUSED.
- NEVER OVERLOAD a rope.
- INFORM YOURSELF: Read and understand rope equipment manufacturer's literature prior to operation.
- REFER TO APPLICATION CODES, STANDARD, and REGULATIONS for INSPECTION REQUIREMENTS AND REMOVAL CRITERIA.
PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Layer</th>
<th>Furl (lb.)</th>
<th>Line Speed (fpm)</th>
<th>Load Capacity (lb.)</th>
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Performance is based on 15 gpm @ 2000 psi with 3/8" wire rope. Rated line pull shown is for line blank only. Consult the wire rope manufacturer for wire rope ratings.
**STEP 1**

Insert wire rope into proper slot according to drum rotation and thread set screws into threaded holes in drum flange making sure that both screws clamp onto wire rope.

**CAUTION:**

If the wire rope is not installed for the correct drum rotation, the winch brake valve will not hold the load.

**STEP 2**

Once set-screws are tightened secure, the wire rope is properly installed.

**CAUTION:**

Do not operate winch with less than 5 full wire rope wraps on the drum.
COMMERCIAL INTERTECH MOTOR

TO REVERSE WIRE ROPE PULL IN DIRECTION

METHOD 1

REMOVE THE COUNTERBALANCE VALVE AND OUTLET FLANGE.
REMOVE THE MOTOR MOUNTING BOLTS AND ROTATE THE MOTOR 180°.
REASSEMBLE MOTOR, COUNTERBALANCE VALVE, AND OUTLET FLANGE.

METHOD 2

SWITCH POSITIONS OF COUNTERBALANCE VALVE AND OUTLET FLANGE.
NOTE: HOSES GOING TO BRAKE HOUSING MAY NEED TO BE LONGER.

MOTOR DRAIN TO TANK
OUTLET FLANGE
COUNTERBALANCE VALVE
PRESSURE PORT

( STD ) L

CHAR-LYNN MOTORS

( STD ) L

L PRESSURE TO V1 ROTATES WINCH DRUM COUNTERCLOCKWISE WHEN VIEWED FROM MOTOR END.
R PRESSURE TO V2 ROTATES WINCH DRUM COUNTERCLOCKWISE WHEN VIEWED FROM MOTOR END.

TO REVERSE WIRE ROPE PULL DIRECTION,
SWITCH POSITIONS OF CARTRIDGE AND PLUG.

PORT V1
PORT V2
CARTRIDGE
PLUG

( STD ) L

L PRESSURE TO V1 ROTATES WINCH DRUM COUNTERCLOCKWISE WHEN VIEWED FROM MOTOR END.
R PRESSURE TO V2 ROTATES WINCH DRUM COUNTERCLOCKWISE WHEN VIEWED FROM MOTOR END.

TO REVERSE WIRE ROPE PULL DIRECTION,
SWITCH POSITIONS OF CARTRIDGE AND PLUG.

PORT V2
PORT V1
PLUG
CARTRIDGE

TYPICAL WINCH HYDRAULIC SYSTEM

WINCH CONTROL VALVE
(3 POSITION, 4 WAY, MOTOR SPOOL W/RELIEF VALVE)

TO MOTOR

FLUID LEVEL
RETURN VALVE
RELIEF VALVE
HYDRAULIC PUMP
RESERVOIR STRAINER

TO MOTOR

ALL UTILITY UNITS ARE BI-DIRECTIONAL WITHOUT MANIPULATION OF CARTRIDGE, AND OR PLUG LOCATIONS.

NOTE: IF TENSIONER AND, OR FAIRLEAD OPTIONS EXIST, THEN REVERSAL OF THEIR POSITION IN RELATION TO WINCH MUST TAKE PLACE BEFORE REVERSAL OF WIRE ROPE PULL DIRECTION CAN OCCUR.
# 1.10523 Parts List
## Motor End Installation

<table>
<thead>
<tr>
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<td>HOUSING - BRAKE</td>
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<td>SEAL – 2 7/8 I.D. x 3 5/8 O.D. x 3/8</td>
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GEAR END INSTALLATION
1.30185
### 1.30185 PARTS LIST
#### GEAR END INSTALLATION

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INPUT SHAFT INSTALLATION
1.40298
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KIT-CABLE HOLD DOWN
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AIR KICKOUT
GEAR END COVER INSTALLATION
1.60174
### 1.60174 PARTS LIST
GEAR END COVER INSTALLATION

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<td>RING – RETAINER – 1 ¼ x .05 THICK</td>
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<td>5</td>
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<td>ORING-6 ½ ID</td>
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### Calculated Generic Bolt Installation Torques

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<th>Grade (5) $T$</th>
<th>Grade (8) $T$</th>
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<td>Lb<em>Ft (lb</em>in)</td>
<td>Lb<em>Ft (lb</em>in)</td>
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<td>6.3 (76)</td>
<td>8.9 (107)</td>
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<td>5/16-18</td>
<td>13 (156)</td>
<td>18.5 (221)</td>
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<tr>
<td>3/8-16</td>
<td>23</td>
<td>33</td>
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<td>7/16-14</td>
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This table is used for applications without external loads. Reference EN11000.

This standard defines generic torque values for installing threaded fasteners used in the manufacture of DP products. This document is not intended to over-ride or otherwise change specific torque values defined individually on other DP documents.
GENERAL INFORMATION

MISCELLANEOUS LUBRICATION POINTS
dp fairlead rollers require lubrication by a medium heavy oil on a weekly basis. Fairlead rollers are supplied with oil impregnated bronze bearing and require a few drops of medium heavy oil at each bearing location.

Manual kick out levers should be cleaned and lubricated with a coat of light oil on the shaft and detent mechanism (avoid excessive oil build up, which will attract dust).

PNEUMATIC SYSTEM
This product uses air pressure to power the drum disengagement. This component requires clean dry air for trouble free service. A typical pneumatic system should have an FDL (filter, dryer, lubricator) and a pressure regulator. More than (1) pressure regulator may be required, depending on the pressure requirements of the different components. It is important to keep moisture from entering the winch. Moisture could cause corrosion. If temperatures fall below 32°F, moisture could freeze and render the component inoperable. See the dimensional drawing for the pressure requirements.

EXTENDED STORAGE PROCEDURES
If you plan to store your dp product for more than 90 days some extra precautions are required to insure your product will be ready to perform when put back into service.
- Wash and dry the exterior of the winch.
- Service the wire rope as recommended by the wire rope manufacturer.
- The winch should be filled with the appropriate corrosion-inhibiting lubricant and operated for 5 minutes in both directions to distribute the lubricant. The winch should then be filled to the highest possible level, i.e. vent high (this will insure the maximum coverage of internal components). Note: drain oil to normal operation level before returning to service.
- The internal components of the pneumatic system should be coated with a corrosion-inhibiting lubricant. If a pneumatic lubrication system is not installed, this can be accomplished by spraying an aerosol lubricant into the ports of the components and shifting several times to distribute the lubricant evenly.
- All ports should be plugged (i.e. motor inlet/outlet ports, drum disengagement)
- Lubricate all external components
  - Fairlead rollers
  - Pivot points of cable hold down
  - Manual drum disengagement handle

HYDRAULIC SYSTEM

FLUID SPECIFICATIONS
When choosing a fluid, it is important to consider the start-up and operating temperatures of the hydraulic system. Generally the fluid is thick when started and with movement it warms and thins out. Premium grade petroleum based hydraulic fluids will provide the best performance. They contain anti-wear agents, rust/oxidation inhibitors, and anti-foaming agents. dp recommends an oil viscosity of 20-43 cSt and a temperature range of 100-140°F. The oil viscosity should never fall below 13 cSt or the temperature rise above 180°F. Oil viscosity greater than 43 cSt is not normally detrimental to the motors used on dp products, except 2 speed and variable displacement motors. Consult your local hydraulic fluid distributor for assistance in selecting a fluid that would best suit your climate and application.

FLUID / SYSTEM MAINTENANCE
Maintaining correct fluid viscosity and cleanliness level is essential for all hydraulic systems. dp products are used in a wide variety of applications and it is impossible to publish a fluid maintenance schedule that would cover every situation. dp recommends that the minimum hydraulic fluid cleanliness be maintained at an ISO Cleanliness Code 18/13 rating. Your hydraulic system designer can recommend an adequate filtration system and maintenance schedule to achieve this rating.
WINCH LUBRICATION

LUBRICANT SPECIFICATIONS
Gear lubrication is an important component in insuring the long life of your winch. The type of lubricant will have a great influence. Generally a gear lubricant should have a viscosity of 100 to 250 cSt at the expected ambient operating temperature. For operation in lower temperature ranges, it is imperative that the pour point of the lubricant be at least 10° below the lowest ambient temperature. The oil you select should meet GL5 performance standards for high pressure, possess rust/oxidation inhibitors, and low foaming properties. Many lubricants available under a variety of trade names meet these requirements. Unless otherwise requested, the gear oil your winch was shipped with is GL5 80W90. Consult your local lubricant distributor on the selection that best fits your climate and application.

GENERAL LUBRICANTS
For Reference Only

<table>
<thead>
<tr>
<th>Temperature (°F)</th>
<th>Type of oil</th>
<th>Viscosity (cSt) At 40°/100°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>10° to 120°</td>
<td>85W140</td>
<td>360/25</td>
</tr>
<tr>
<td>-25° to 40°</td>
<td>80W90</td>
<td>145/15</td>
</tr>
<tr>
<td>-50° to 30°</td>
<td>Synthetic ISO 32</td>
<td>31/6</td>
</tr>
</tbody>
</table>

All types of lubricant listed here conform to MIL SPEC-L-2105D.

CHANGE INTERVAL
The initial lubricant should be changed after the first 10 hours of operation. During this "breaking in" period it is normal for the lubricant to contain minuscule black & bronze particles. Subsequent changes should be scheduled every 250 hours of operation or annually.

LUBRICATION LEVEL
The oil level should be checked with the winch centerline horizontal. The winch should be filled to the bottom of the fill/level plug. If your winch has more than (1) fill/level plug, select the plug that is slightly above the centerline. If unit is mounted in a non-standard orientation, consult dp Service Department for lubrication level information.

GREASE
If the winch comes with a fairlead that has grease fittings on the rollers, the grease used conforms to MIL-G-10924 and should be used in the temp range of -50° F to 120° F.

1. Oil Check and Fill
   a. Remove oil fill plug.
   b. Oil level should be visible. If overfull and thin it may indicate hydraulic oil leakage through the brake. Correct by draining and refilling before operating winch. If this condition continues winch should be checked for seal failure. See Trouble Shooting Information.
   c. Add specified gear lubrication oil as required to bring to proper level.
   d. If winch lubrication oil consistently checks low, inspect unit for leaking seals or gaskets.

2. Oil Drain and Replacement
   a. Remove oil drain & fill plug.
   b. Drain oil.
   c. Clean drain plug and replace. Fill with oil to proper level.
   d. Oil should be changed after the first 6 weeks of operation. Change should then be on an annual basis.

3. CAUTION: Winch lubrication oil is not hydraulic oil.

Note: dp Manufacturing, Inc. takes no responsibility for the subsequent performance of hydraulic or mechanical components if oil, grease or hydraulic fluid possessing properties other than what dp Manufacturing, Inc. recommends is used.
REPAIR & REPLACEMENT PARTS ORDERING INFORMATION

To insure satisfactory product performance after repairs, always use genuine dp Manufacturing replacement parts.

MODEL IDENTIFICATION
Always furnish the dp Model Number and Serial Number when ordering parts. This information is found on the product nameplate and/or stamped on top of the motor end support.

PART NUMBER AND DESCRIPTION
In addition to the serial number, always give the part number and description of each part ordered. If there is any doubt as to the correct part number and description, furnish a dimensional sketch or return the part to be replaced.
Your cooperation in furnishing as much information as possible will assist us in filling your orders correctly in the shortest possible time.

FACTORY RETURNS / SERVICE
Advanced authorization is required prior to the return of any items to dp Manufacturing, Inc. Contact the dp Service Department for a Return Goods Authorization (RGA) number. Shipment to and from dp Manufacturing, Inc. shall be at the customers expense.

Rermit all correspondence concerning parts, service, and returned goods authorization to:

dp Manufacturing, Inc.                        Phone (918) 298-8300
11135 S James Ave.                            Fax (918) 298-8301
Jenks, OK  74037-1731                           E-Mail service@team-twg.com

Notes:
DP Winch Limited Warranty

SUPERSEDES ALL PRIOR WARRANTIES

Seller warrants that each article sold under this order shall at the time of shipment (i) conform to applicable specifications, and (ii) be free from defects in material and workmanship during normal and ordinary use and service (the "Warranty").

Buyer's exclusive remedy and Seller's sole obligation under this Warranty shall be, at Seller's option, to repair or replace any article or part thereof which has proven to be defective, or to refund the purchase price of such article or part thereof.

This Warranty shall expire one (1) year from the date the article is first shipped by Seller. Notice of claimed breach of this Warranty must be given by Buyer to Seller within the applicable period. Such notice shall include an explanation of the claimed warranty defect and proof of date of purchase of the article or part thereof for which warranty coverage is sought. No allowances shall be made by Seller for any transportation, labor charges, parts, "in and out" costs, adjustments or repairs, or any other work, unless such items are authorized in writing and in advance by Seller. Nor shall Seller have any obligation to repair or replace items which by their nature are expendable.

If an article is claimed to be defective in material or workmanship, or not to conform to the applicable specifications, Seller will either examine the article at Seller's site or issue shipping instructions for return to Seller. This Warranty shall not extend to any articles or parts thereof which have been installed, used, or serviced otherwise than in conformity with Seller's applicable specifications, manuals, bulletins, or instructions, or which shall have been subjected to improper installation, operation, or usage, misapplication, neglect, overloading, or employment for other than normal and ordinary use and service.

This Warranty shall not apply to any articles or parts thereof furnished by Seller to Buyer's specifications and/or furnished by Buyer or acquired from others at Buyer's request.

SELLER MAKES NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES OF ANY KIND, OTHER THAN THE WARRANTY EXPRESSLY SET FORTH ABOVE. SUCH WARRANTY IS EXCLUSIVE AND IS MADE AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The remedies for this Warranty shall be only those expressly set forth above, to the exclusion of any and all other remedies of whatsoever kind. The limited remedies set forth above shall be deemed exclusive, even though they may fail their essential purpose. No agreement varying or extending the foregoing Warranty, remedies, exclusions, or limitations shall be effective unless in writing signed by an executive officer of Seller and Buyer. This Warranty is non-transferable.

Under no circumstances shall Seller be liable (i) for any damage or loss to any property other than the warranted article or part thereof, or (ii) for any special, indirect, incidental, or consequential damage or loss, even though such expenses, damages, or losses may be foreseeable.

The foregoing limitations on Seller's liability in the event of breach of warranty shall also be the absolute limit of Seller's liability in the event of Seller's negligence in manufacture, installation, or otherwise, with regard to the articles covered by this Warranty, and at the expiration of the Warranty period as above stated, all such liabilities shall terminate.