HYDRAULIC WINCH
15JDXX4L1H-006

SERIAL NUMBER: _____ **DATE:** _____

WINCH

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

Rev -7
06/2019

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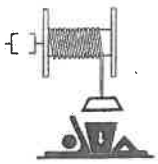
GENERAL WARNING SHEET

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

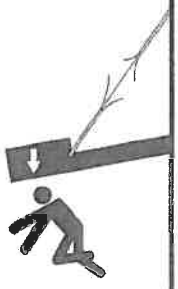
The last five wraps of wire rope must be left on the drum to assist the wire rope clamp in holding the load.

DANGER

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

WARNING

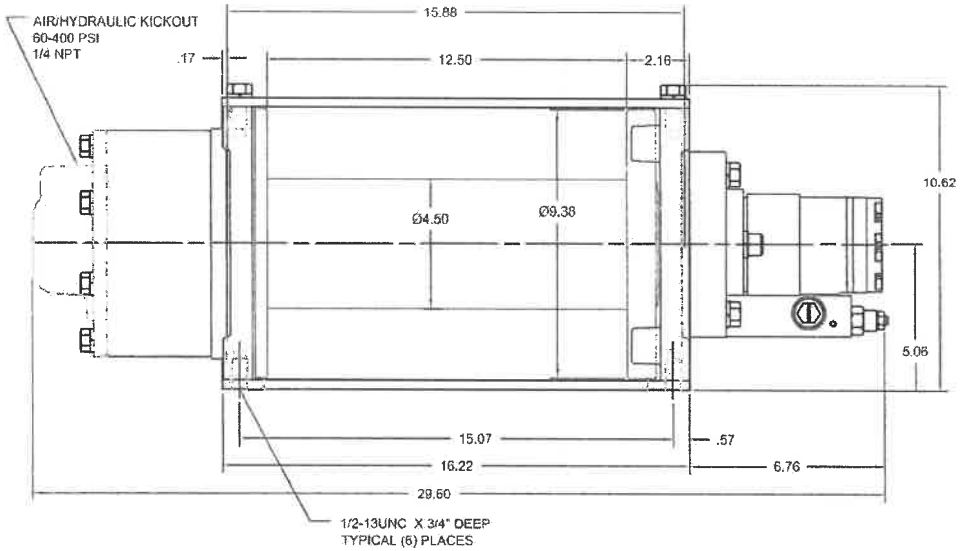
Failure to adequately align, support, or attach winch to a suitable mounting base could result in a loss of efficiency or premature failure of winch, wire rope, or mounting base.

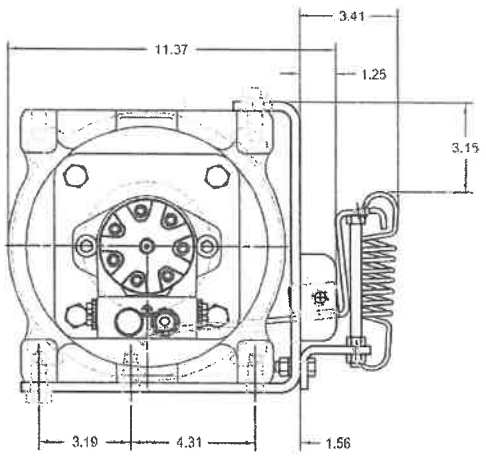


WARNING

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

Layer	Line Pull (lbs.)	Line Speed (fpm)	Drum Capacity (ft.)
1	15000	32	29
2	12500	39	65
3	10700	45	106
4	9380	52	153

Performance is based on 15 gpm @ 2900 psi with Ø1/2 wire rope
Rated line pulls shown are for the winch only.
Consult the wire rope manufacturer for wire rope ratings

LOC	PART NUMBER	QTY	DESCRIPTION

TITLE: WINCH-MOD-15JDXX4L1H-006

	BY	DATE
DWN	DS	7-22-13
CHD		
APD		
SCALE	1/4	

SUPERSEDES

UNLESS OTHERWISE SPECIFIED:
1. All dimensions are in inches
2. Inside corner radii .03"
3. Outside chamfer .03" x 45°
4. Remove all burrs and break sharp edges
5. Finish to be per EN11000
6. Tolerances: Fractions ±1/32" Decimals ±.010" Angles ±1° Concentricity .010" TIR Machine finish 125

DO NOT SCALE DRAWING

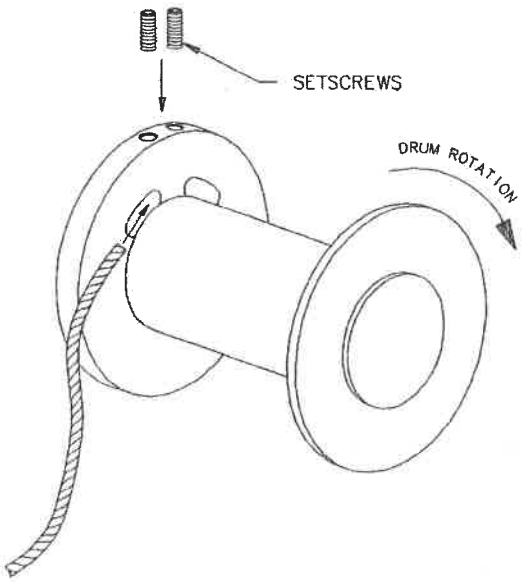
dp Manufacturing, Inc.
Tulsa, Oklahoma USA
PH. (918) 250-2450
Fax. (918) 250-0600

WINCH

WT.

SHEET 1 of 1

DRAWING # 15JDXX4L1H-006

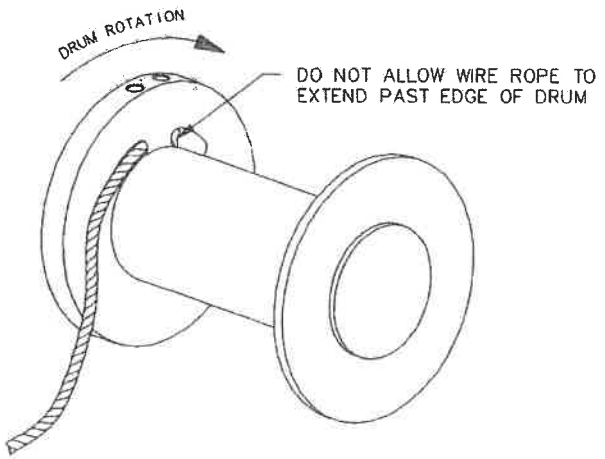


STEP 1

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.

WIRE ROPE INSTALLATION

G-SERIES

COMMERCIAL INTERTECH MOTOR

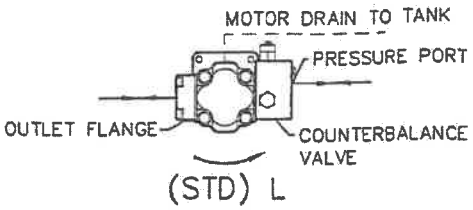
TO REVERSE WIRE ROPE PULL IN DIRECTION

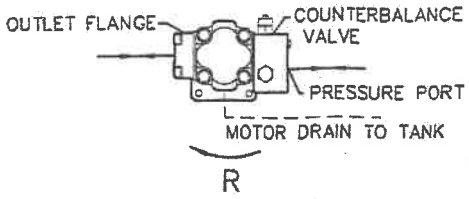
METHOD 1

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.





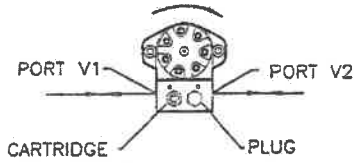
CHAR-LYNN MOTORS

(STD) L

L PRESSURE TO V1 ROTATES WINCH DRUM CLOCKWISE WHEN VIEWED FROM MOTOR END.

R PRESSURE TO V2 ROTATES WINCH DRUM COUNTER CLOCKWISE WHEN VIEWED FROM MOTOR END.

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



(STD) L

L PRESSURE TO V1 ROTATES WINCH DRUM COUNTER CLOCKWISE WHEN VIEWED FROM MOTOR END.

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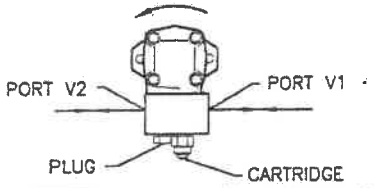
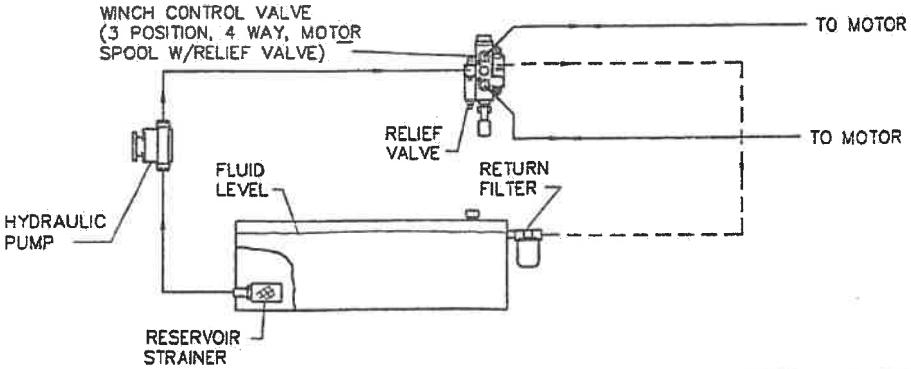
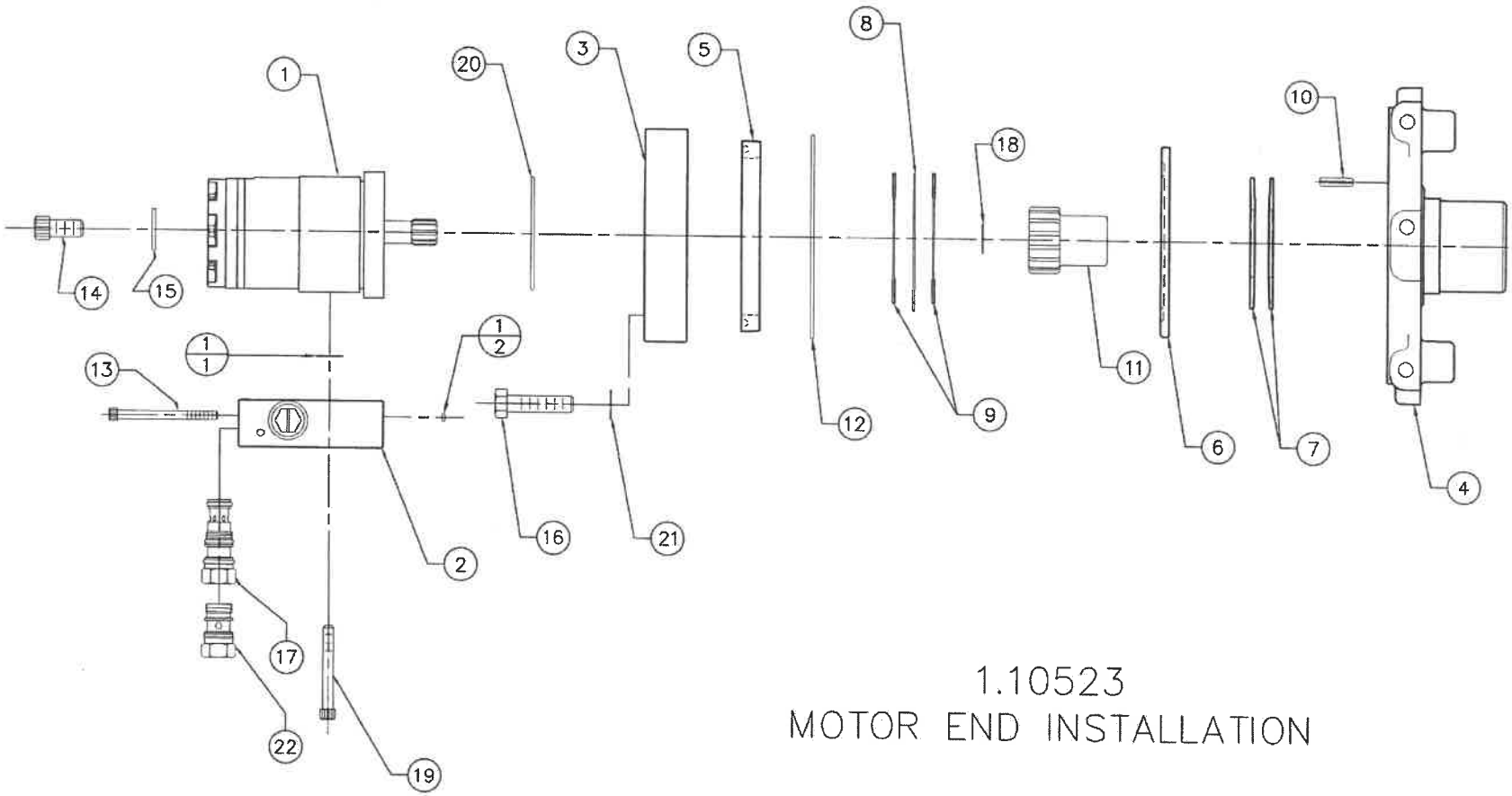


TYPICAL WINCH HYDRAULIC SYSTEM



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

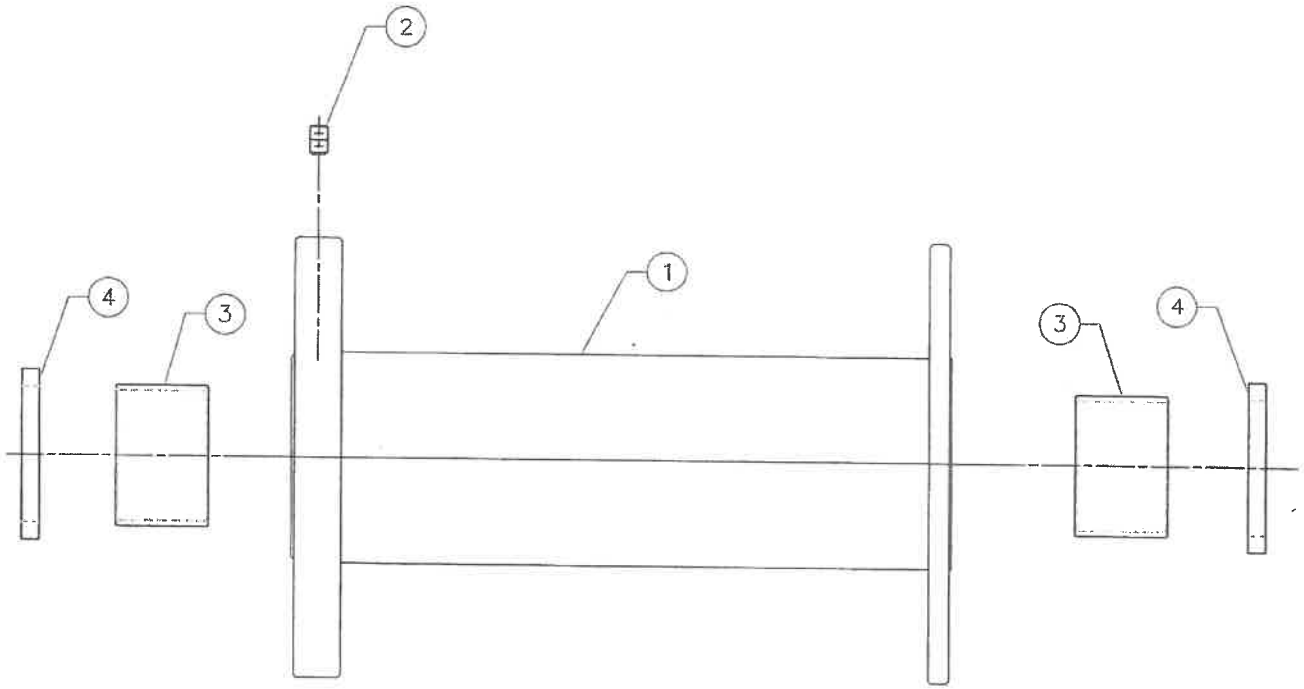
NOTE: IF TENSIONER AND, OR FAIRLEAD OPTIONS EXIST, THEN REVERSAL OF THEIR POSITION IN RELATION TO WINCH MUST TAKE PLACE BEFORE REVERSAL OF WIRE ROPE PULL DIRECTION CAN OCCUR.



1.10523
MOTOR END INSTALLATION

1.10523 PARTS LIST
MOTOR END INSTALLATION

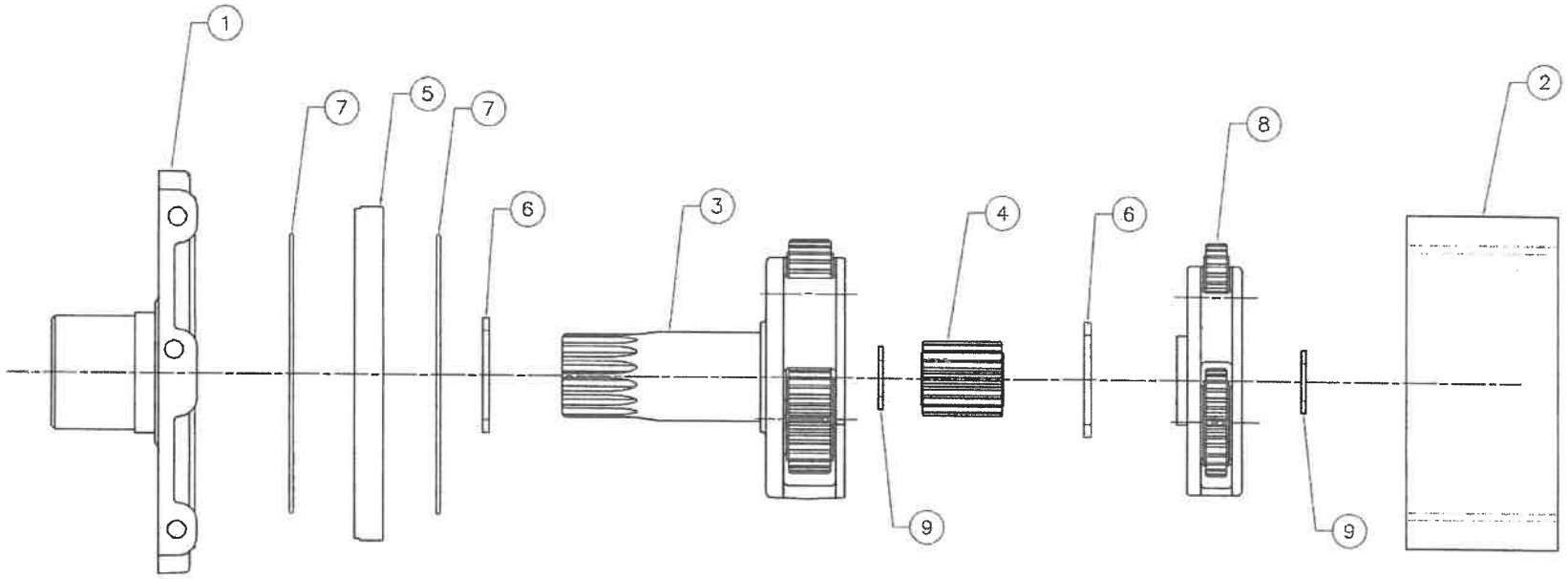
LOC.	PART NO.	DESCRIPTION	QTY.
1	73261	MOTOR – HYDRAULIC	1
1.	9730	ORING-15/32ID x 3/32W-#2-112-BUNA N-70D	1
2	13738	VALVE – COUNTERBALANCE	1
1.	9612	O–RING – 1/8 I.D. x 103 SECTION	1
3	13151	HOUSING – BRAKE	1
4	13220	SUPPORT – MOTOR END	1
5	9681	SEAL – U CUP – 4.75 I.D. x 5.75 O.D. x 5	1
6	13174	PLATE – THRUST	1
7	3607	SPRING – BELLEVILLE – 4 x 2 x .12 x .14	2
8	13034	PLATE – STATIONARY	1
9	13035	PLATE – FRICTION	2
10	3598	PIN – SPIRAL – ¼ x 1	2
11	13166	SHAFT – BRAKE	1
12	9680	O–RING – 6 I.D. x 6 ¼ O.D. x 3/32 SECTION	1
13	4076	CAP SCREW – SOCKET HEAD – ¼ – 20UNC x 4 ½	1
14	1454	CAP SCREW – SOCKET HEAD – ½ – 13NC x 1 ¼	2
15	1144	WASHER – LOCK – ½ – HI COLLAR	2
16	1405	CAP SCREW – HEX HEAD – ½ – 13NC x 2 – GRADE 8	4
17	70040	CARTRIDGE – SUN	1
18	3460	RING – RETAINER – ¾ x .035 THICK	1
19	1286	CAP SCREW – SOCKET HEAD – 5/16 – 18NC x 1 ½	4
20	9637	O–RING – 3 ¼ I.D. x 3/32 SECTION	1
21	1495	WASHER – LOCK – ½	4
22	70042	PLUG – SUN	1



DRUM INSTALLATION
1.20190

1.20190 PARTS LIST
DRUM INSTALLATION

LOC.	PART NO.	DESCRIPTION	QTY.
1	14608	DRUM	1
2	1746	SET SCREW – SOCKET HEAD – 3/8 – 16NC x 1	2
3	12077	BEARING – BRONZE – 2 ¾ I.D. x 3 O.D. x 2	2
4	9896	SEAL – 2 7/8 I.D. x 3 5/8 O.D. x 3/8	2



GEAR END INSTALLATION
1.30185

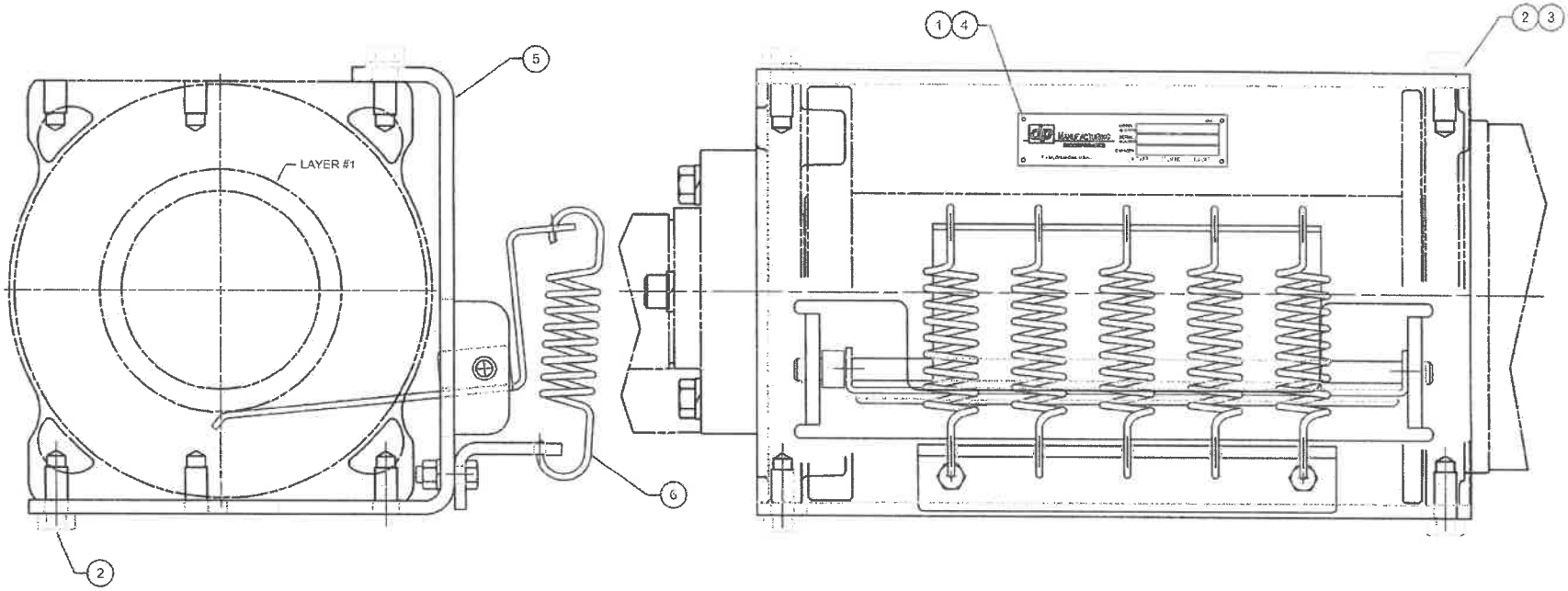
1.30185 PARTS LIST
GEAR END INSTALLATION

LOC.	PART NO.	DESCRIPTION	QTY.
1	13411	SUPPORT – GEAR END	1
2	81107	GEAR – RING	1
3	14613	CARRIER – ASSEMBLY – SECONDARY	1
4	13380	GEAR – SUN – SECONDARY	1
5	14615	SPACER – GEAR RING – 8.02 O.D. x 6.25 I.D.	1
6	12083	WASHER – THRUST – NYLON	2
7	9897	O–RING – 6 ½ I.D. x 3/32 SECTION	2
8	3412	CARRIER – ASSEMBLY – PRIMARY	1
9	13385	WASHER – THRUST – 1.625 O.D. x .937 I.D. x .125 THICK	2

INPUT SHAFT INSTALLATION
1.40298

1.40298 PARTS LIST
INPUT SHAFT INSTALLATION

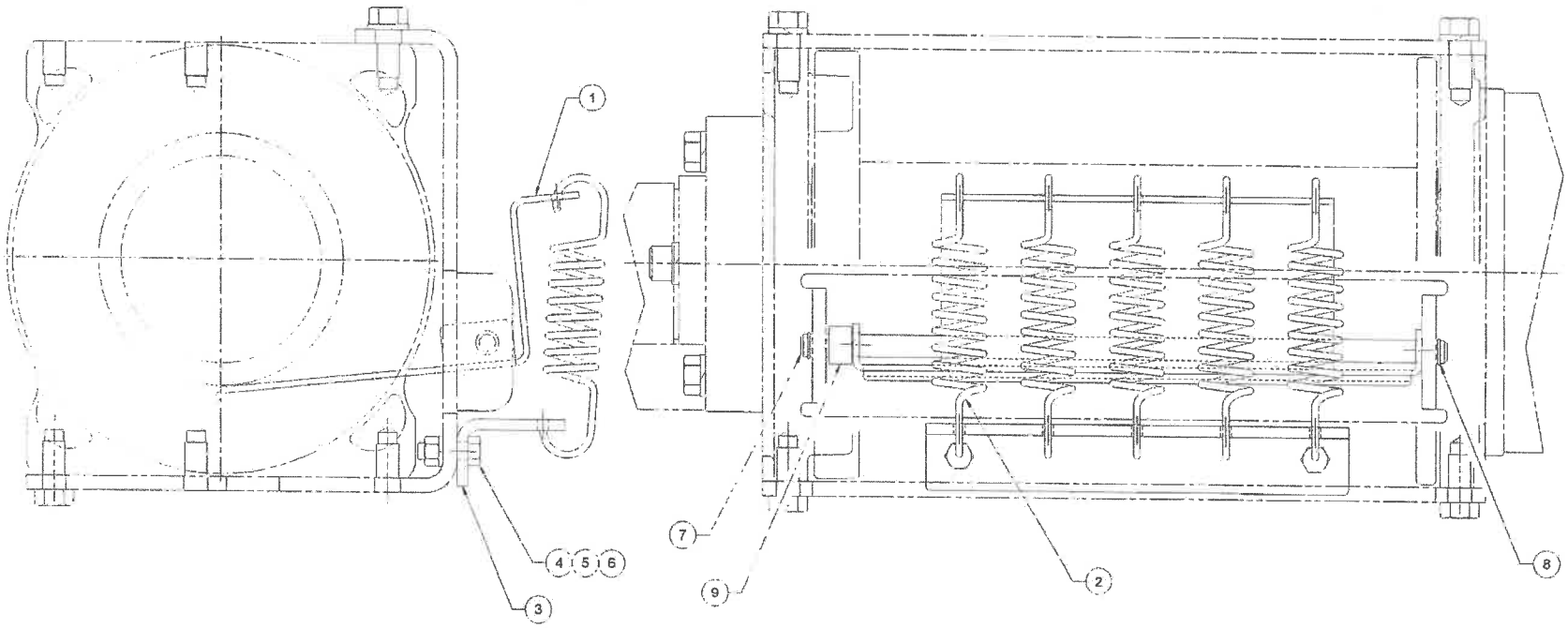
LOC.	PART NO.	DESCRIPTION	QTY.
1	14616	SHAFT	1



BASE MOUNT INSTALLATION - 5.50269

5.50269 PARTS LIST
BASE MOUNT INSTALLATION

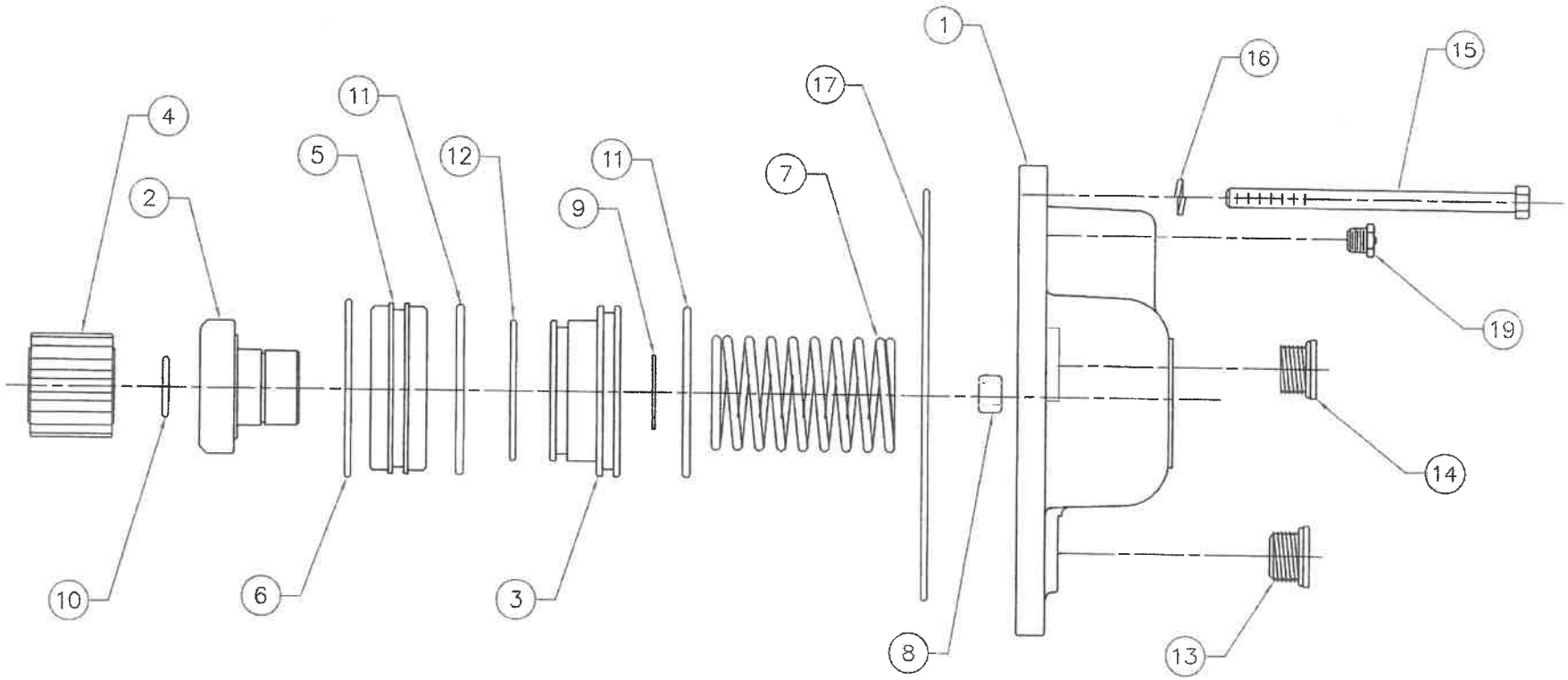
LOC.	PART NO.	DESCRIPTION	QTY.
1	1165	RIVET-DRIVE-U TYPE-#2 x 1/4L RD.HD	4
2	1401	CAPSCREW-HH-1/2-13NC x 1	4
3	1495	WASHER-LOCK-1/2	2
4	12113	PLATE-ID-WINCH-1 3/16 x 4 ¾	1
5	53717	BASE MOUNT-14/16J	1
6	55319	KIT-CABLE HOLD DOWN	1



KIT-CABLE HOLD DOWN

55319 PARTS LIST
KIT-CABLE HOLD DOWN

LOC.	PART NO.	DESCRIPTION	QTY.
1	53716	ARM-Z-CBLHLDWN	1
2	2331	SPRING-EXTENSION	5
3	53715	BRACKET-MOUNTING	1
4	1303	CAPSCREW-HH-3/8-16UNC x 1 1/4-GR 5	2
5	1390	NUT-HEX-3/8	6
6	1395	WASHER-LOCK-3/8	2
7	53571	SHAFT-PIVOT	1
8	3584	RING-RETAINING	2
9	14827	SPACER-ARM	1
10	1316	CAPSCREW-HH-3/8-16UNC X 5	2



AIR KICKOUT
GEAR END COVER INSTALLATION
1.60174

1.60174 PARTS LIST
GEAR END COVER INSTALLATION

LOC.	PART NO.	DESCRIPTION	QTY.
1	13370	COVER – GEAR END	1
2	13372	COUPLING – DRIVE	1
3	13373	PISTON	1
4	13386	GEAR – SUN	1
5	13296	CYLINDER – PISTON	1
6	3632	RING – RETAINER – ROUND SECTION – 3 O.D. x 3.4 GAGE	1
7	2309	SPRING – COMPRESSION	1
8	81612	BUSHING – BRONZE – 5/8 O.D. x 3/8 I.D. x 3/8	1
9	3303	RING – RETAINER – 1 ¼ x .05 THICK	1
10	3321	RING – RETAINER – 7/8 x /08 ROUND SECTION – 805I.D.	1
11	9672	O–RING – 2 5/8 I.D. x 1/8 SECTION	2
12	9704	O–RING – 2 1/8 I.D. x 2 3/8 O.D. SECTION	1
13	76343	PLUG – SOCKET HEAD – O–RING – BOSS – MAGNETIC #10	1
14	76344	PLUG – O–RING – BOSS – #10 – SOCKET – 7/8–14	1
15	4102	CAPSCREW-HH-5/16-18UNC X 5 1/2 GRADE 8	8
16	1168	WASHER – LOCK – 5/16	8
17	9897	O–RING – 6 ½ I.D. x 3/32 SECTION	1
18	1157	CAPLUG – #4 – RED – ¼–NPT	1
19	3059	VENT	1

55311 PARTS LIST
SEAL KIT

LOC.	PART NO.	DESCRIPTION	QTY.
1	9681	SEAL-U CUP	1
2	9680	ORING-6 ID	1
3	9637	ORING-3 ¼ ID	1
4	9896	SEAL-2 7/8 ID	2
5	9897	ORING-6 ½ ID	3
6	9672	ORING-2 5/8 ID	2
7	9704	ORING-2 1/8 ID	1
8	9739	ORING-5/8 OD	1
9	9821	ORING-11/16 x 3/32W	2
10	9612	ORING-1/8 ID	1

Calculated Generic Bolt Installation Torques

Nominal Diameter/ Thread Pitch	*Grade (5)* *T*	*Grade (8)* *T*
	Lb*Ft (lb*in)	Lb*Ft (lb*in)
1/4-20	6.3 (76)	8.9 (107)
5/16-18	13 (156)	18.5 (221)
3/8-16	23	33
7/16-14	37	53
1/2-13	57	80
5/8-11	113	159
3/4-10	200	282
7/8-9	322	454
1-8	483	682
1 1/8-7	596	966

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

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

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 lever.
   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.

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

dp Manufacturing, Inc.
11135 S James Ave.
Jenks, OK 74037-1731

Phone (918) 298-8300
Fax (918) 298-8301
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.