Reelcraft Industries

Industrial Grade Reels

Series HD70000 & L 70000
1. Intended Applications
Intended Applications

HD70000
- Air / water
- Fire service
- Grease
- Oil transfer
- Diesel
- Petrol / gasoline
- Chemical Transfer

L 70000
- Portable power
- Hard wiring
- Indoor / non-weather tight
2 Overview
Glossary of General Terms

- Guide arm
- Swivel assembly
- U-bolt locations
- Guide roller assembly
- Spring anchor
- Spring case
- 1/2” NPT Female Inlet
- Latch
- Upright
- Mounting base
- Spool
- Aluminum hub with sealed ball bearings
# HD70000 Model Number Significance

**HD76075 OLP-V**

## Revision letter:
- “HD” – Heavy Duty Base

## Series designation

## Hose size (I.D.):
- 4 – 1/4”
- 6 – 3/8”
- 8 – 1/2”

## Hose length:
- 025 – 25’
- 050 – 50’
- 065 – 65’
- 070 – 70’
- 075 – 75’
- 100 – 100’

## Enclosure note:
- O – open
- E – enclosed

## Pressure:
- LP – low ≈ 300psi
- MP – medium ≈ 3000 psi
- HP – high ≈ 5000 psi

## Engineering notes:
- Color: NOTE: other options available
  - “-35NK” = black
  - “-17WH” = white
  - “-40BL” = blue
  - “-39GY” = grey
- Seal Change:
  - No Suffix = Aflas
  - “-B” = Buna
  - “-V” = Viton
  - “-E” = EPR
- Roller guide position:
  - “-XXX” – Usually designated by two to three numbers and signifies a customer driven change to a standard product.
L 70000 Model Number Significance

**L 70100 123 3**

**Series designation**
- L - Designation for electric

**Cord length:**
- 075 – 75’
- 100 – 100’

**American Wire Gauge:**
- 10 – 10 AWG
- 12 – 12 AWG
- 16 – 16 AWG

**No. of Conductors:**
- 2 – Two conductors
- 3 – Three conductors
- 4 – Four conductors

**Cord Ending:**
- None – Open end
- 3 – Single receptacle
- 7 – Duplex outlet box
- 9 – Triple tap
- X – Flying lead
3 Common Product Features
Base

Four press studs for mounting guide arm.

Widened cast aluminum latch pawl assembly with stainless steel torsion spring.

Re-designed latch pawl engages hole in frame to help eliminate movement of stationary parts.

Base is stamped from 7 gauge Industrial steel and robotically welded to 10 gauge upright. Engineered forms throughout give added strength.

Four 1/2" (.516 dia.) mounting holes. Not slotted.
Guide Arm

The Series 70000 reels are supported on one side of the reel with a guide arm stamped from industrial grade steel.

Guide arm receives a composite roller assembly. Roller assemblies are riveted to the guide arm. Replacements are sold as an entire guide arm assembly.

Unless otherwise specified, reels ship in the side wind position. Reels can be ordered in SW, BW or TW positions.

Adjusts to seven different positions for versatile mounting and a wide range of applications.

Guide arms are stamped with forms for superior strength through engineering.
Spool

- Partially spun edge adds strength and protects hose from abrasion and the reel from corrosion.
- Multiple U-bolt locations to eliminate latch out at full hose extension.
- Heads stamped form 16 gauge industrial steel.
- Indent is stamped into sheave to allow for smooth hose transition onto the spool.
- Die cast aluminum bearing housing provides great strength and sealed ball bearing allows for smooth operation at low and high torque.
Spring Case

Spring stud anchors the spring and pinned in place by a hole in spring case and the spring cover.

Rivets secure the spring case cover (not pictured) to the spring case creating a fully containerized spring assembly.

Spring case stamped from 18 gauge industrial steel and powder coated prior to assembly. A liberal amount of assembly grease is used.

Ratchet is riveted to the reverse side of the spring case. Sealed bearing (1 of 2) seats in middle of the aluminum casting. It provides smooth, effortless rotation.
Latching Parts

Cast ratchet wheel has been machined out to receive a sealed ball bearing. Latching surface is significantly wider than competing reels. This provides better wear and longer service live.

Oversized latch pawl features a stainless torsion spring. Torsion springs provide excellent service life when compared to tension springs. Our internal life cycle testing resulted in the torsion spring outlasting 1 million cycles.
Comparison to Other Reelcraft Reels

Series HD70000 vs Series 7000
- Same **HEIGHT AND DEPTH**
- 1.25” wider for an additional 30’-50’
- Dual sealed ball bearings
- Containerized drive spring
  - Excludes 50’ models
- Roughly 12-15% premium

Series HD70000 vs Series 80000
- 5.125” shorter
- 3.5” narrower
- 4.25” less depth
- Roughly 12% cost savings
Product Features
HD70000
Main Shaft / Fluid Path

Main shaft (item 2) machined from solid 1.25” in diameter and plated.

Heavy duty, extruded aluminum spring arbor (item 1).

Machined flat engages keyway of cast aluminum arbor (item 1) and holds it stationary to the main shaft (item 2).

Five external snap rings (item 3) keep dual sealed ball bearings, spool and arbor in place while reel is in use.

Set screw (item 4) has thread locker applied. It keeps main shaft (item 2) from rotating once assembled into the upright.

Balanced style swivel & ell (item 5) for low pressure. Shaft inlet 1/2” NPTF (F)(item 2). Ball bearing style swivel for medium and high pressure.

Dual sealed ball bearings (not shown)
5 Product Features L 70000
Main Shaft

- **Set screw (item 4)** has thread locker applied. It keeps main shaft (item 2) from rotating once assembled into the upright.
- **Heavy duty, extruded aluminum spring arbor (item 1).**
- **Machined flat** engages keyway of cast aluminum arbor (item 1) and holds it stationary to the main shaft (item 2).
- **Five external snap rings (item 3)** keep dual sealed ball bearings, spool and arbor in place while reel is in use.
- **Dual sealed ball bearings (item 5)** provide smooth operation and extend service life.
Collector Ring

Terminal mounting bracket (item 1) stamped from 11 gauge steel incorporates press studs to facilitate mounting of terminal and brushes.

High quality brass brushes (item 3) connect to terminal block (item 2) by way of tightening terminal forks to block with screw.

Electrical continuity is transferred by brushes riding on brass rings on the collector ring itself (item 4).

Brushes (item 3) are held in place by brush mounting assembly (item 6).

Wire nuts (item 7) are used to make the connection from the inlet assembly (not pictured) to the slip ring (item 4).

Cable strap (item 5) manages cable inside the spool hat.
Collector Ring

Bracket keeps holds brushes firmly to slip ring such that continuity is not lost during operation.

Working end of cable is wired to terminal block.

Inlet cord is pulled through shaft and connected to slip ring with wire nuts.
My Reel Won’t Retract At All!?!?

**Latch out**

- Reels come from the factory in top wind position.
  - If a customer moves the guide arm position on the reel before installation, they will also need to move the U-bolt to the corresponding position on the spool to prevent “latch out” at full extension.

Note: Refer to service manual for further instruction

**Freight damage**

- HD70000 Series reels leave the factory in a double wall corrugated cardboard box. They are enclosed in a bag and have high density foam inserts to protect your reel.
  - It is always wise to inspect the packaging before receipt of a reel. If the packaging is damaged, un-box and ensure that the reel operates smoothly and there are no dents, scratches or dings in the sheet metal before signing for delivery.
My Reel Won’t Latch!?! 

Damaged, disassembled or missing latch spring

• The latch spring holds the pawl tight to the ratchet.
  • The hose has snapped back and the resulting force un-hooks the latch spring or breaks it entirely.

• Investigate and replace latch spring

Constant tension

• Reelcraft offers most all of it’s latching reels in a constant tension version as well. This will be designated in the part number with a “-CT” suffix.

  HD76070 OLP (standard)
  HD76070 OLP-CT (constant tension)
My Reel Won’t Retract All The Hose!?!?

Add tension

• Coil springs with time will lose some of their tension.

Customer supplied hose

• Customer’s hose may not meet our minimum bend radius or recommended O.D.

Reel mounted in excess of 15’ overhead

• This type of installation necessitates that the bumper be set such that 15’ or more of hose is hanging off the reel at all times. In turn, tension is increased on the drive spring, causing it to wear prematurely or in extreme cases fail entirely.

• Always consult engineering in this type of application.
My Reel is Making an Alarming Noise

Intermittent coil release

• Suction is generated between coils causing the retraction of hose to be sporadic, usually accompanied by an out of the ordinary noise.

• Usually a warranty issue

Spring thump

• It is typically evident when the hose is allowed to retract quickly.

• Caused by excess movement of spring assembly within the spring pan.

• It is not detrimental to the reel’s function.
My Reel Isn’t Building Any Tension!?!?

Spring form bent or broken

• The part of the spring that engages the arbor has fractured causing the spring to spin freely of the arbor.

• If experienced in warranty period, potential return.
My Reel is Leaking At The Swivel Union!?!?

If the leak has occurred at the threaded portion that mates to the main shaft, the most likely fix will be further tightening the swivel or additional pipe tape.

Leaks may also occur at either end of the swivel body. The cause of this type of leak is a failure in the o-ring(s).

It is always important to verify that compatible fittings are used. Our most common is National Pipe Thread Fitting (NPTF or NPT, for short).

Leaks at either the threaded portion where the ell meets the swivel body or where the ell attaches to the hose can generally be corrected with either tightening or additional pipe tape.