

# Extreme Duty Sprocket Centrifugal Clutch



Our new centrifugal clutch\* has been engineered to provide long service life even in the most demanding applications. Ideal for retrofit or new equipment applications, this clutch was designed specifically to be a low-cost upgrade to the current low-priced centrifugal market.

Our centrifugal clutches are ideal for the everyday demands of go-karts and youth-model snowmobiles. A thermodynamically designed clutch shoe increases the clutch's capacity to absorb heat without damaging the clutch springs.



## Benefits

- Bi-directional operation
- Load-free starting
- Overload protection
- Optional engaging speeds available
- Excellent quality at a competitive price
- Easy to install
- Longer life than competitive clutches

## Advantages

- Sintered metal clutch shoes
- Integral key design
- Replaceable sprocket
- Easy-to-change springs

Part Number	Description
LD4S-4L-PKGD	3/4B, 10T, 40/41 CHAIN
LD4S-5L-PKGD	3/4B, 12T, 35 CHAIN
LD4S-6L-PKGD	5/8B, 10T, 40/41 CHAIN
LD4S-7L-PKGD	5/8B, 12T, 35 CHAIN



\*patent pending



The Extreme-Duty Sprocket Centrifugal Clutch is designed to tolerate the excessive heat that can be generated by:

- inexperienced riders,
- riding with one foot on the brake,
- riding in soft dirt and tall grass,
- frequent starts and stops.



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Hilliard also has available an extreme-duty centrifugal clutch in a pulley version, which is designed to handle the everyday demands of chipper shredders, power trowels, concrete mixers, power screeds, air compressors, and lawn and garden equipment. Ask for literature bulletin EDPO1 for more details.

*The Hilliard Corporation reserves the right to change specifications and dimensions at any time.  
Please contact the factory for the most current information.*

**The Hilliard Corporation**

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**Your Local Representative:**



# EXTREME DUTY

## CENTRIFUGAL CLUTCHES



**Hilliard**  
SINCE 1905

**Our newest centrifugal clutch has been engineered to provide**

## Extreme-Duty Go-Kart Centrifugal Clutch



The Extreme-Duty Sprocket Centrifugal Clutch is ideal for the everyday demands of go-karts and youth-model snowmobiles.

A thermodynamically designed clutch shoe increases the clutch's capacity to absorb heat without damaging the clutch springs, resulting in longer life and better reliability.

### Precision and durable motion control solutions

Extreme-Duty Centrifugal Clutch	Model #	Bore Size (inches)	Keyway (inches)	Sprocket Specifications	Engaging Speed (RPM)
Sprocket	LD4S-4	3/4	3/16	10 T, #40/41 chain	2300
	LD4S-4L	3/4	3/16		
	LD4S-5	3/4	3/16	12 T, #35 chain	2300
	LD4S-5L	3/4	3/16		
	LD4S-6	5/8	3/16	10 T, #40/41 chain	2300
	LD4S-6L	5/8	3/16		
	LD4S-7	5/8	3/16	12 T, #35 chain	2300
	LD4S-7L	5/8	3/16		

The extreme-duty centrifugal clutches share many of the same benefits and advantages:

#### Benefits

- Bi-directional operation
- Load-free starting
- Optional engaging speeds
- Excellent quality at a competitive price
- Easy to install
- Longer life than competitive clutches
- Soft starts
- Overload protection

#### Advantages

- Integral key design
- Sintered metal clutch shoes
- Heat dispersing spring-to-shoe design
- Integral sheave (pulley version)

**long service life, even in the most demanding applications.**

## Extreme-Duty Pulley Centrifugal Clutch

The Extreme-Duty Pulley Centrifugal Clutch is ideal for retrofit or new equipment applications. This clutch was designed to be a low-cost upgrade to the current low-priced centrifugal market and is ideal for the everyday demands of chipper shredders, power trowels, concrete mixers, power screeds, air compressors, lawn and garden equipment, and more.

A thermodynamically designed clutch shoe increases the clutch's capacity to absorb heat without damaging the clutch, making it more dependable and long lasting.



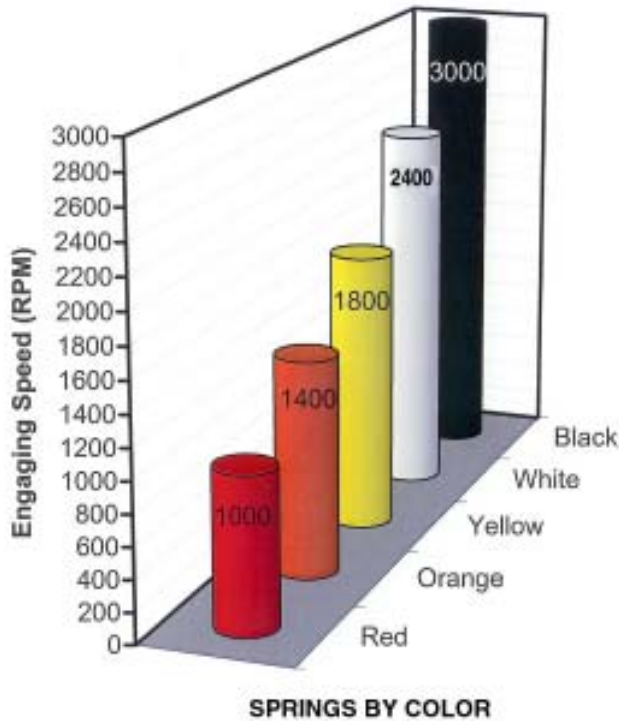
### Precision and durable motion control solutions

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Extreme-Duty Centrifugal Clutch	Model #	Bore Size (inches)	Keyway (inches)	Pulley Diameter (O.D. inches)	Belt Groove	Engaging Speed (RPM)
4" Single-Groove	LD4P-46	1	1/4	3.7	AB	1800
	LD4P-49	3/4	3/16	3.7	AB	1800
	LD4P-50	1	1/4	3.0	AB	1800
	LD4P-53	3/4	3/16	3.0	AB	1800



**Clutches are available with different spring sets for optional speed engagements.**



3000 RPM Spring



2400 RPM Spring



1800 RPM Spring



1400 RPM Spring



1000 RPM Spring



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**Hilliard Sprocket Clutch Selection Guide:**

1. Engine Horsepower (Not to exceed 12 HP)
2. Engine Shaft Diameter
3. Number of Sprocket Teeth Required
4. Chain Size Required
5. Set Screw "not" Required
6. Bolt and Washer on end of Engine Crankshaft Required to secure clutch to Shaft

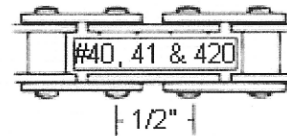
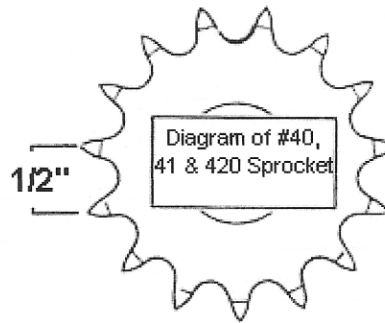
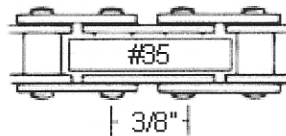
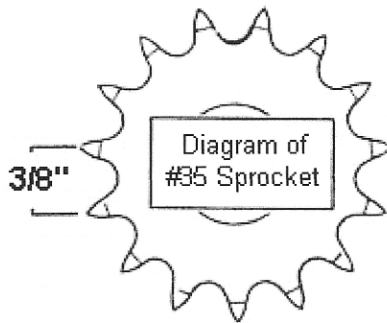


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### Ordering Tech Tips:

1. Find out if you have a #35, #40, #41, #420 chain. To tell if your chain or your sprocket is #35, #40, #41 or #420 pitch, measure the distance from the top of one tooth of your sprocket to the top of the next tooth. Another way is to measure from the center of one pin on your chain to the next pin.



2. Find out if the number of teeth that you are using currently by counting them off of your current clutch. If you don't know how many teeth you want contact a go kart dealer.
3. Measure the engine crankshaft to find out what size bore should be in the clutch. The bore is the hole in the middle of the clutch that fits over the engine crankshaft. To accurately measure the outside diameter of your engine crankshaft, use a crescent wrench as shown in the drawing. Tighten the wrench around the crankshaft and measure between the jaws of the wrench. This measurement is the outside diameter.
4. Verify that the engine's idle speed is below the engaging speed of the clutch that you are looking to purchase. Standard engagement speed for this type of centrifugal clutch is 2200-2400 RPM. The engagement speed is the point at which the clutch will start to transmit torque to the wheels, or driven member. The engine's idle speed should be no more than 2000 RPM for these clutches to work properly. A higher idle than 2000 could start the clutch to engage prematurely.