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MÁS DE 70 AÑOS

Auto-Lok Differential

Traction Solutions For All Seasons

Hilliard

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The Hilliard Corporation has developed a new differential for the Lawn and Garden industry. The Auto-Lok™ Differential is used on the primary drive axle and replaces the limited slip or open differential. It is easily incorporated into existing designs and is being offered as an off-the-shelf item for walk-behind equipment.

Features and Benefits

- Equal power transferred to both wheels regardless of traction
- Self-contained: No levers or mechanisms to engage or disengage
- Locks and unlocks automatically
- Improves steering and maneuverability
- Positive back drive through both wheels
- Compact design

Hilliard also does custom-design work to fit customer's needs.

Applications

The Hilliard Auto-Lok™ (patent 6,722,484 and 6,629,590) can be used in the following applications:

Hydrostatic Transaxle

- Walk-behind power equipment (snowthrower, fertilizer spreader, brush cutter, commercial mower, rototiller)
- Garden and lawn tractors
- Utility vehicles
- Subcompact, compact, and commercial tractors

Conventional Transaxle

- Walk-behind power equipment (snowthrower, fertilizer spreader, brush cutter, commercial mower, rototiller)
- Garden and lawn tractors
- Utility vehicles
- Subcompact, compact, and commercial tractors

Stand-alone Differential and Axle

- Walk-behind power equipment (snowthrower, fertilizer spreader, brush cutter, commercial mower, rototiller)
- Garden and lawn tractors
- Utility vehicles
- Recreational vehicles

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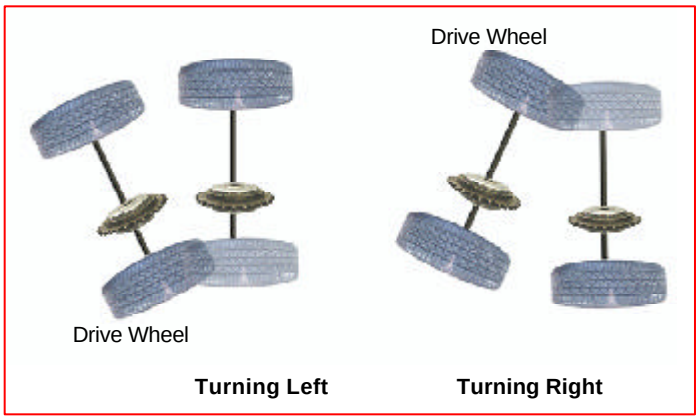
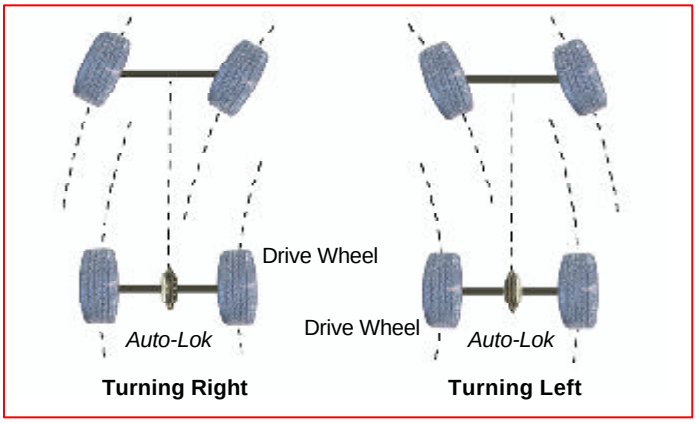
Description of Operation

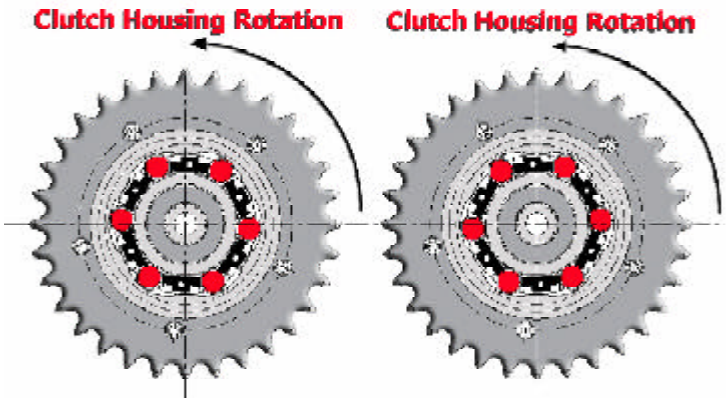


Two-Wheeled Application

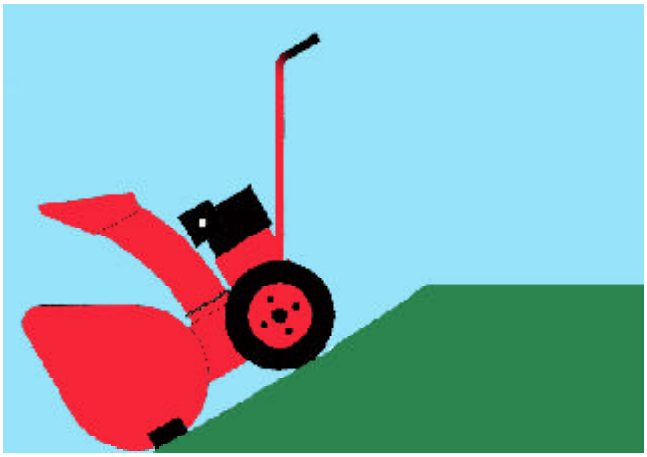


Four-Wheeled Application

While the machine moves in a straight path in a two-wheeled application, both wheels have positive drive. When the machine turns left or right, the inner wheel will be the drive wheel and the outer wheel can move at its own speed independent of the inner wheel. When the machine is returned to a straight path, both wheels once again have positive drive.
In a four-wheeled application, when the machine turns right, the rear left wheel travels at ground speed while the rear right wheel is the drive wheel. When turning left, the rear right wheel travels at ground speed, while the rear left is the drive wheel.



Input Driving Wheels Wheels Back-Driving to Input



When wheel's speed exceeds the speed of the clutch housing, the cage will shift the rolls to the opposite engagement angle, allowing the machine to descend down the gradient at the speed of the transmission.

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Extreme-Duty Pulley Centrifugal Clutch

Features and Benefits:

- Sintered metal clutch shoes
- Bi-directional operation
- Easy to install
- Multiple engagement settings
- Load-free starting
- Soft starts
- Overload protection
- Shaft sizes available in 3/4” and 1”.

Horsepower range: Fractional to 12 hp

Applications: Chipper-shredders, power trowels, air compressors

For more information, request bulletin EDPO1.

Front Drive System (Differential)

Our patented design consists of a dual bi-directional overrunning clutch for use as a secondary front drive for 4-wheel drive applications.

Features and Benefits:

- Acts like a locking differential when engaged, but like an open differential when cornering
- Offers positive engagement of both front wheels in forward and reverse as a differential package
- Automatic engagement on the fly -- no shift linkages required
- Electric on/off engagement

Horsepower range: 10 to 65 hp

Applications: Utility vehicles, commercial mowers, all-terrain vehicles

For more information, request bulletin LGP-3

Hilliard
MOTION CONTROL DIVISION

ALD-2

THC-500-08/04