

# SmartShift™

THE LATEST AND SMARTEST ADVANCE  
IN SHIFT-BY-WIRE TECHNOLOGY



The SmartShift™ control is exclusive to Freightliner and Sterling. Mounted on the steering column, it provides a convenient interface with Eaton Autoshift™ shift-by-wire transmissions.

## SmartShift™ Customer Benefits

### Convenient

- Fully automated shifts that can be overridden when required for total control
- In 'manual' mode, easy to shift with the push or pull of a hand lever
- No worries about grinding gears, avoiding driveline damage and expenses
- Easier shifting to allow drivers to concentrate on road and traffic

### Column-Mounted Control

- Less obstructive than floor or seat mounted controllers
- No gear lever, for more space in cab and improved access to the sleeper

### Clutch Required Only for Starts and Stops

- Better fuel economy – shifts at the most effective engine speed and torque
- Perfect shifts every time
- Prolonged clutch life, to reduce running costs
- Less driver fatigue, assisting OH&S risk management

### Dash-Mounted Display

- Conveniently located on dash panel, or Freightliner's Driver Message Centre – constantly alerting driver of gear selection
- Safe view areas – no need to take your eyes from the road to check status
- Provides information on engaged gear and gears available

### Safety

- Automatic shifting feature can be overridden by the driver, to maintain momentum
- Eliminates the possibility of missing a gear whilst shifting, so as not to become a road hazard
- No need to remove hands from wheel to operate to maintain vehicle control
- Less physical and mental driver fatigue, aiding OH&S risk management
- Drivers' eyes stay looking at the road, maintaining awareness of surrounding traffic



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### SMARTSHIFT™ IN DETAIL

#### EASY TO USE

SmartShift only requires the use of the clutch when starting off or coming to a complete stop.

Drivers can select 'AUTO' or 'MAN' mode with a sliding switch on the SmartShift™ lever.

In 'AUTO', the fully automated control shifts on its own, or drivers can override to manually select any gear within the engine acceptable rev range.

In 'MAN', manual selection is as easy as flicking the lever up for an upshift and down for a downshift. Two quick flicks and the gearbox skip shifts up or down if the engine operating rev range allows it. Three flicks and it will skip three gears, up or down, engine rpms allowing.

The transmission and engine controls deliver a perfect shift every time whether selected manually or automatically.

Need some help decelerating or descending a grade? Move the switch on the shifter to "L" and it boosts engine rpms, shift points and will even downshift gears while applying the engine brake right down through the range.

Wondering what gear you are in? It's up in lights on the dash display or Freightliner's Driver Message Centre.

#### ADVANCED TECHNOLOGY

SmartShift™ is the latest development in shift-by-wire technology. It allows the driver to concentrate more on the road and less on the hassle of shifting, by eliminating the need to use the clutch between gears during normal driving.

By electronically monitoring and manipulating the engine speed and torque, SmartShift™ moves the sliding dog clutches in the transmission with actuators, providing smooth and perfect shifts every time.

Used in conjunction with Eaton's AutoShift transmissions, the SmartShift™ system is the way of the future. The way that all trucks will move ahead in the future.

#### SAFETY FEATURES

By placing the shift lever on the steering column, there is no need for the driver's hands to be removed from the steering wheel. Feet can remain on the pedals, and eyes on the road ahead.

The dash mounted display indicator tells the driver what gear is currently engaged, and what gears are available to shift into.

Another advantage of mounting the SmartShift™ on the steering column is that it frees up useable floor space where the shift tower used to be, thus providing easier access between the driver's seat and the sleeper area.

#### DRIVER FEATURES

By letting the engine and transmission electronics decide the best moment to make the shift, there is less revving of the engine, helping less experienced drivers drive like a professional. There's also no need to force the gear shifter into place possibly damaging the gears or synchronisers.

The SmartShift™ monitors road speed, engine RPM and torque to determine when to most efficiently move the clutches in the transmission with the actuators so that the shift is completed without touching the clutch, even while cruise control is activated.

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