



Spicer® Drive Axles

Roadranger®

More time on the road *

Driver Instructions

Spicer Drive Axles

AXDR0117

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Dual Range Driving

From off-highway starting to rolling on the highway (with multispeed or automatic transmissions)

1. Disengage the *lockout* . . . place the lockout selector valve in the UNLOCK position.
2. Move *axle* selector valve to LOW range. Shift transmission to start truck.
3. Driving off-highway . . . to keep the truck rolling on rough terrain and secondary roads, keep *axle* in LOW range and shift transmission to maintain desired road speed.
4. Driving on highway . . . with truck rolling in LOW axle range and approaching a highway . . . shift axle to HIGH range as follows:
 - make sure *lockout* is disengaged.
 - keep accelerator down and move *axle* valve lever to HIGH range.
 - keep driving with accelerator down until you want the axle to shift,
 - then release accelerator until axle has shifted.

You are now in HIGH axle range on the highway. Shift the transmission to obtain desired cruising speed.

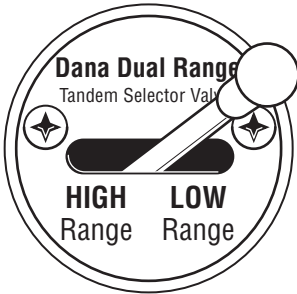
Downshift Axle for More Power

- Keep accelerator down and move *axle* selector valve lever to LOW.
- Keep driving with accelerator down until you want to downshift the axle . . . then release and depress accelerator pedal quickly to increase engine rpm . . . axle will shift to LOW range.

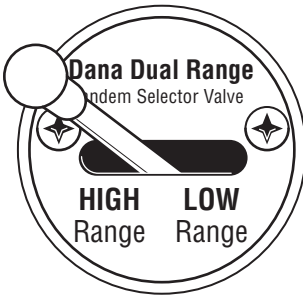
Dual Range Driving



With lockout disengaged . . . axle can be operated in LOW or HIGH range.



For startability and off-highway driving, keep axle in LOW range.



Axle in HIGH range for on-highway driving.

Dual Range Driving

Important Procedures to Remember

- Shift axle at slower speed until you are accustomed to driving the vehicle.
- Park truck in *axle* in LOW range.
- **Never engage lockout when wheels are spinning.**
- Engage *lockout* only under poor traction.
- Do not operate truck on dry pavement with *lockout* engaged.



With good traction, keep *lockout* disengaged. Drive with *axle* in LOW or HIGH range.



With poor traction, engage *lockout*. Drive with *axle* in LOW range only.

Dual Range Driving

Dual Range Tandem Axle Features

Driving a truck in heavy-duty, on-off highway operations is a pleasure with the Dana Dual Range concept. Two axles-in-one give you flexibility for easy driving, productive hauling regardless of operating conditions.

Power when you need it; speed when you want it. The Dana dual range axle is designed to provide deep-hole reduction for power in off-highway driving and fast ratio for top speeds on the highway.

In LOW range the axle operates as a strong double reduction axle for tough operating conditions. In HIGH range, it functions as a strong single reduction axle for high-speed operations.

Shifting the Dana dual range axle is easy and quick. An air control valve selects the axle ranges you want. A flip of the valve lever is all that is necessary.

Dual Range Axle Overview

When the axle selector valve lever position is changed, an air-operated shift system goes into action.

A piston air-shift unit mounted in the axle does the work. When air pressure is applied to the piston, it shifts the axle from one range to another. A heavy-duty compression spring assures rapid return action when air pressure is released.

Shifting within the axle is accomplished through Dana exclusive clutch gearing designed for fast, smooth shifting.

There's no-strain driving in on-off highway operations with an Dana dual range tandem.

For additional information, call the Roadranger Call Center at 1-800-826-HELP (4357).

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