———Correct Tire Selection

IMPORTANT: When replacing tires, consult your tire dealer. Mixing worn and new tires, bias and radial, or tires of different diameters or loaded radii can reduce tire life and overall tractor performance.

Using any tire combination, other than those listed on the Tire Compatibility Chart, could result in premature tire and driveline wear due to excessive underspeed or overspeed.

The size ratio of the front wheels to the rear ones is precisely determined in order to produce a positive front wheel lead of between 0% and 5%. To ascertain the correct ratio when changing tires, proceed as follows:

Determine MFWD Axle Gear Ratio:

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Locate ratio of gear pair for front-wheel drive axle output. This is displayed on a label located on the rear of the seat back. The following ratios are possible:

- **1.347**
- **1.392**

Determine Tire Rolling Circumferences:

This information must be obtained from the tire manufacturer's manual.

1. Select tires with suitable load-bearing capability.
2. Select tires appropriate to the tractor's top speed.
3. From the manual, obtain the rolling circumference of the tire desired for the rear wheel.
4. From the manual, obtain the rolling circumference of the tire desired for the front wheel.

Calculate MFWD Axle Overspeed:

—IMPORTANT: If a different tire combination is selected, or new rear tires are selected with an SRI (speed/radius index) higher than the previous one, the tractor's electronics must be recalibrated by your John Deere dealer.

Calculate the overall transmission ratio using the following formula:

MFWD Axle Overspeed Formula

$$\text{MFWD Axle Overspeed} = \frac{\text{Rolling Circumference of Front Tire}}{\text{Rolling Circumference of Rear Tire}} (* \text{ F/R Axle Ratio}) * 100\%$$

IMPORTANT: To prevent damage to the drivetrain and avoid premature tire wear, obtain a front axle overspeed calculation between 100—105%. This correlates to a 0—5% MFWD axle overspeed, which is recommended for optimal performance.

Using the above formula, the following is an example of the calculation:

- Rolling circumference of the front tire = 3420 mm (134.6 in.)
- Rolling circumference of the rear tire = 4395 mm (173.0 in.)
- Front to rear axle ratio = 1.347

MFWD Axle Overspeed Example

$$\text{MFWD Axle Overspeed} = \frac{3420}{4395} (* 1.347) * 100\%$$

In the example, the MFWD axle overspeed equates to 104.8% or a 4.8% overspeed. The tires would be acceptable to use.

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