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## Backspace

Backspace is measured from the far back edge of the rim shell to the back side of the center disc.

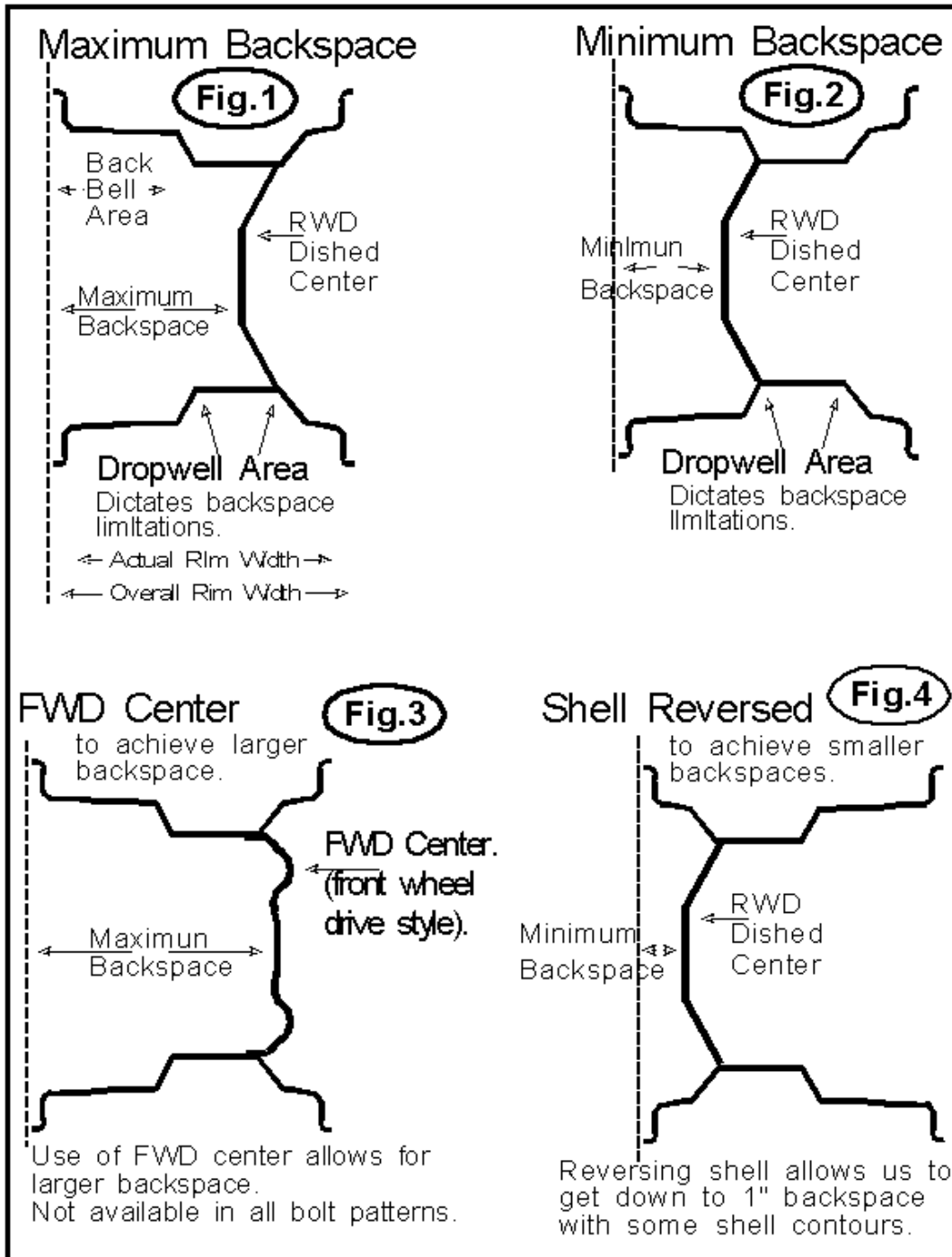
**To Measure:** Use a straight edge across the back side of the rim shell and then measure to the back side of the center disc. Or - lay the wheel (back side down) on the floor; then insert a tape measure through the center hole and measure from the floor up to the back side of center disc - this will be the backspace.

DIAMOND Racing Wheels are available with standard backspace in 1/2" increments. The wheel size, style and center will dictate the backspace limits (the least and most backspace that can be obtained).

### **Backspace Limits**

To help you better understand the constraints we have in building wheels with the desired backspace you need, we must consider the shell contour and center style. See the diagrams below to better understand backspace limits.

**Note: Large backspace requests can reduce clearance and cause caliper interference, as the hub/rotor may move into the small diameter area (dropwell) of the rim shell.**



**BACKSPACE TECH TIPS:**

**Tips for circle track racers on backspace adjustments:**

A quick and easy way to change weight percentages when setting up a race car is to change the wheel backspace. This can move as much as 30 to 50 lbs. (depending on the car) for each 1" change of backspace. You can increase the left side or diagonal weight easily by just changing wheel backspace.

Another trick at the track, when trying to tighten or loosen the car, is to change either the right or left rear wheel backspace. Move either the right or left wheel - "in to tighten" or "out to loosen" the car. This can help compensate for changing track conditions without having to change shocks or springs. This is a quick and easy adjustment and you will see the results right away.

**The EFFECTS of BACKSPACE:**

A **smaller backspace** such as 2" (negative offset) will make the **track wider**.

A **larger backspace** such as 6" (positive offset) will make the **track narrower**.

Please note that getting the correct track width for the cars design is usually more important than the positive or negative effects of changing backspace.

**A.) The effects of small backspace (negative offset):**

- 1.) Places the weight of the tire and wheel farther outboard, away from the suspension.
  - a.) Results in increased loads and stresses on wheel bearings, ball joints and control arm bushings.
  - b.) May also cause steering wheel kickback and increased steering effort, making the car harder to control during turning and cornering.
  - c.) Creates a greater scrub radius and increased tire scrub and wear as the steering center is way back behind the wheel centerline.

**B.) The effects of large backspace (positive offset):**

- 1.) Places the weight of the tire and wheel farther inboard and closer to the suspension.
  - a.) Too much may cause clearance problems with brake calipers, suspension parts, etc.
  - b.) Reduces loads and stresses on bearings and ball joints.
  - c.) Reduces steering effort, making the car easier to turn and corner.
  - d.) Reduces the scrub radius and reduces tire scrub and wear.

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