

What is Wet Road Driving and Aquaplaning?

Worksheet

Aquaplaning is tire loss of contact with road due to water film pressure; it reduces braking and steering control. Prevention: lower speed, reduce pressure, and avoid puddles.

Questions

1. Aquaplaning is caused by...

- A) Low tire pressure
- B) Water film under tires
- C) ABS malfunction
- D) Old brake pads

2. If you start aquaplaning, what's the first action?

- A) Brake hard
- B) Accelerate
- C) Ease off accelerator
- D) Turn sharply

3. Braking distance on wet road vs. dry is roughly...

- A) Same
- B) 25% longer
- C) 50% longer
- D) Double

4. Minimum tire tread for safe wet driving?

- A) 0.5 mm
- B) 1.0 mm
- C) 1.6 mm
- D) 3.0 mm

5. You encounter a deep puddle on a wet road at 60 km/h. What do you do?

6. Your car starts aquaplaning on a wet highway. How to recover?

7. Compare braking distance on wet vs. dry road at 80 km/h.

8. Define: What is aquaplaning?

9. Define: What causes aquaplaning?

10. Define: How do you prevent aquaplaning?

Answer Key

1. B) Water film under tires — Aquaplaning occurs when tires can't push water away and ride on a water film.
2. C) Ease off accelerator — Easing off accelerator and brakes reduces engine/brake force and allows re-contact.
3. C) 50% longer — Wet conditions reduce tire grip by ~30-50%, increasing braking distance accordingly.
4. C) 1.6 mm — Legal minimum is 1.6 mm; less than this greatly increases aquaplaning risk.
5. 1. Spot puddle in advance; reduce speed BEFORE entering 2. Turn wheels straight (avoid turning while hydro-planing) 3. Drive through puddle slowly and steadily 4. Brake gently after exiting (water may have reduced grip) 5. Allow brakes to dry slightly before harder braking
6. 1. Recognize loss of steering feedback (wheel feels light) 2. Ease off accelerator and brakes completely 3. Keep steering wheel straight 4. Wait for tires to re-contact road (typically 1-2 seconds) 5. Regain control; reduce speed and increase following distance
7. 1. Dry road braking distance: ~60 m 2. Wet road braking distance: ~90-100 m (50% longer) 3. Poor tire tread increases wet distance even further 4. Always allow extra stopping margin on wet roads
8. Tires riding on water film instead of contacting road, causing loss of grip and control.
9. Water depth, speed, tire tread depth, and road surface groove pattern.
10. Reduce speed, maintain tire tread (min. 1.6 mm), and avoid puddles.

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