Car Battery Types

Your Complete Quick Reference Guide

Battery Type Comparison

🔋 Lead-Acid Batteries

Best For: Budget-conscious drivers, older vehicles

Lifespan: 2-3 years

Cost: $100-150

CCA Range: 400-800

Climate: Moderate

✅ **Pros**
- Affordable
- Widely available
- Reliable

❌ **Cons**
- Poor cold weather
- Requires maintenance
- Shorter lifespan

🔋 AGM Batteries

Best For: Modern vehicles, extreme climates

Lifespan: 3-5 years

Cost: $200-300

CCA Range: 500-900

Climate: All climates

✅ **Pros**
- Excellent cold weather
- Maintenance-free
- Handles electronics

❌ **Cons**
- Higher upfront cost
- Heavier than lithium
- Sensitive to overcharging

🔋 Lithium-Ion Batteries

Best For: Performance vehicles, weight-conscious

Lifespan: 5-8 years

Cost: $800-1200

CCA Range: 600-1000+

Climate: Moderate*

✅ **Pros**
- Lightweight
- Fast charging
- Long-lasting

❌ **Cons**
- Very expensive
- Special charging
- Cold weather issues*

🔋 Gel Batteries

Best For: Deep-cycle applications, marine/RV

Lifespan: 4-6 years

Cost: $300-400

CCA Range: 300-700

Climate: All climates

✅ **Pros**
- Deep discharge resistant
- Vibration resistant
- Spill-proof

❌ **Cons**
- Slow charging
- Overcharge sensitive
- Limited availability

Quick Decision Tree

What's Your Priority?

Budget-Friendly Option ↓ **Lead-Acid Battery**

Choose if: Basic vehicle, tight budget, moderate climate

Best All-Around Performance ↓ **AGM Battery**

Choose if: Modern car, want reliability, willing to spend more

Maximum Performance ↓ **Lithium-Ion Battery**

Choose if: Performance vehicle, weight matters, budget not a concern

Deep-Cycle Applications ↓ **Gel Battery**

Choose if: RV, boat, or frequent deep discharge situations

Maintenance Checklist

Monthly Checks

- [ ] Visual inspection for cracks/leaks
- [ ] Look for corrosion buildup
- [ ] Check terminal connections
- [ ] Test voltage (12.6V when off)

Seasonal Maintenance

- [ ] Clean terminals with baking soda
- [ ] Check mounting hardware
- [ ] Apply terminal protectant spray
- [ ] Test battery under load

Cost Analysis Calculator

Calculate Your True Battery Cost

Lead-Acid	AGM	Lithium-Ion	Gel
Initial Cost ($)	Initial Cost ($)	Initial Cost ($)	Initial Cost ($)
Expected Life: 2.5 years	Expected Life: 4 years	Expected Life: 6.5 years	Expected Life: 5 years
Cost/Year: $0	Cost/Year: $0	Cost/Year: $0	Cost/Year: $0

Warning Signs

⚠️ **Time to Replace Your Battery When You Notice:**

- Slow engine cranking
- Dim headlights when idling
- Dashboard warning lights
- Battery age over 3 years
- Frequent jump-starts needed
- Swollen battery case

Troubleshooting Guide

🔧 Car Won't Start

Check:
- Battery voltage (should be 12.6V)
- Terminal connections
- Corrosion on terminals
- Age of battery

🔧 Dim Lights

Check:
- Alternator output
- Battery load test
- Electrical connections
- Parasitic draw

🔧 Frequent Jump-Starts

Check:
- Battery capacity
- Charging system
- Parasitic drain
- Driving habits

Print this guide and keep it in your glove compartment for easy reference