

## ▶ Strato-Charged® Engine Technology

RedMax is the original inventor of the world's first stratified-charged 2-stroke engine. Introduced in 1998, our state-of-the-art Strato-Charged engines are designed with advanced technology that has reduced environmental impact through efficient engine design, increased fuel economy and reduced emissions. For ten years, this proven technology has delivered maximum performance in a light, rugged design with outstanding features that set it apart from the competition.

### The Strato-Charged 2-stroke engine:

- Pure 2-stroke technology which is ideal for commercial application
- Minimum moving parts which reduces chance of problems
- Requires no valve adjustments, oil changes or daily oil reservoir level checks
- Produces extremely low emissions that meet clean air regulations without the need for a heated, heavy catalytic converter
- Achieves up to 20% better fuel efficiency than standard 2-stroke engines
- Generates 15 to 20% more horsepower than a typical 4-stroke or 4-stroke hybrid engine of the same engine displacement size



RedMax's Strato-Charged 2-stroke engines operate at maximum efficiency with just three moving parts. By comparison, 4-stroke or 4-stroke hybrid engines contain as many as 30 moving parts. RedMax Strato-Charged 2-stroke engines are 20 to 25% lighter per same engine size as compared to 4-strokes or 4-stroke hybrids, resulting in much less operator fatigue. Engines with a high power to weight ratio and a high-power output per engine cc size are classified as high-performance engines, and these are the only type of engines made by RedMax.

### Models designated with a "Z" feature Strato-Charged engine technology.

### Engine Durability Ratings

The majority of RedMax professional-commercial, Strato-Charged engines are rated and certified with the EPA and C.A.R.B. to the highest Emission Durability Period (EDP\*). RedMax guarantees that our engines are professional grade and will stay mechanically durable and emissions-compliant for a minimum of 300 hours.

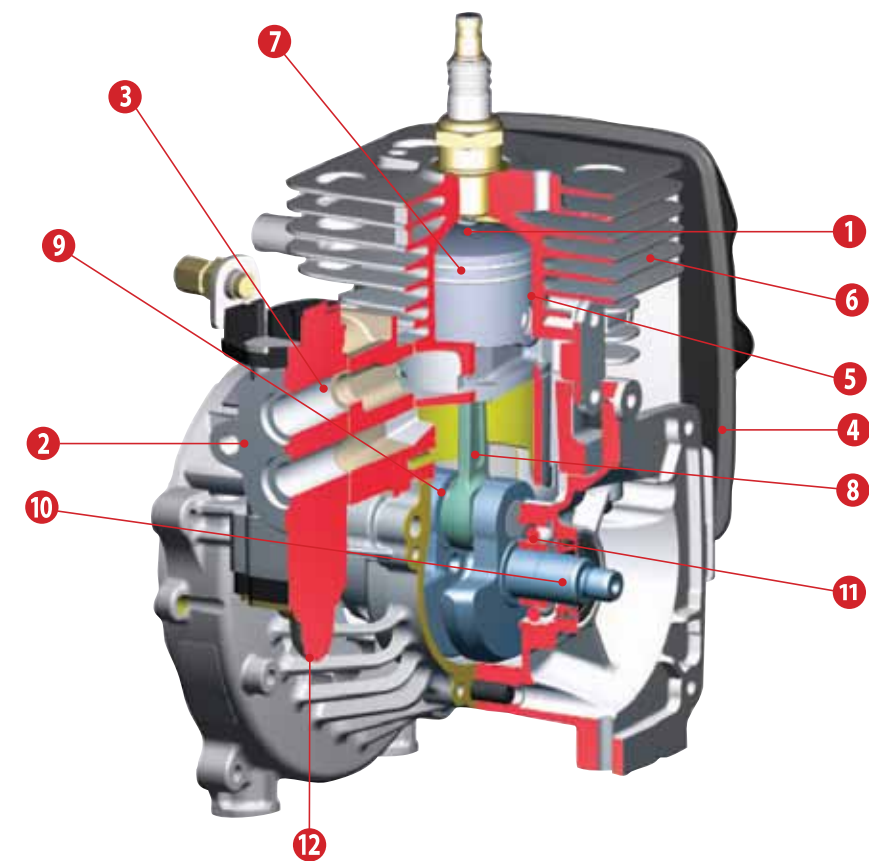
#### There are 3 levels of EDP Certification:

**A: 300 Hours – Professional-Commercial Duty** **B: 125 Hours – Medium Duty** **C: 50 Hours – Light-Duty Homeowner**

The RedMax professional-commercial duty Strato-Charged engine will keep the environment cleaner for 6 times longer than engines certified to only the 50-hour, light-duty homeowner rating.

\* EDP is defined by C.A.R.B. as "Emissions Durability Period." EPA uses the term "useful life", which is defined as "...when engine performance deteriorates to the point where usefulness and/or reliability is impacted to a degree sufficient to necessitate overhaul or replacement..." (U.S. Government, Code of Federal Regulations, Vol. 40, Chapter 1, Sec. 90.105, par. 5, §ii).

## Strato-Charged® Engine Construction



1. **Hemispherical Combustion Chamber:** Promotes and optimizes clean combustion of fuel for more power output
2. **Walbro WYA Rotary Valve Carburetor:** For dependable, fast, crisp acceleration
3. **Fresh-Air Dam Strato Intake:** Helps prevent unburned fuel from exiting with exhaust
4. **Glass-Filled, Low-Tone Muffler:** For additional noise reduction
5. **Industrial Hard-Chrome Plated Cylinder:** Provides additional cylinder and piston life for commercial use
6. **Super-Thin Cooling Fins:** For greater heat dissipation and longer engine life
7. **Two-Ring Piston:** Holds compression longer and increases power output and engine life due to superior heat transfer
8. **Forged I-Beam Connecting Rods:** Lightweight and strong with case-hardened bearing surfaces to increase engine life
9. **Floating-Caged Needle Bearings:** Reduces friction and wear to increase engine life
10. **Chrome Moly Crankshaft:** For additional high-speed performance and engine durability
11. **Heavy-Duty Ball Bearings:** Main bearings support crankshaft to increase engine life
12. **Carburetor Purge System:** Recirculates fuel back to the fuel tank, which makes for easier starting

Electronic computerized ignition systems are completely sealed from dirt and moisture, delivering consistent high-output voltage that ensures fast, easy starts; fast acceleration; smooth power output and optimum performance in any weather condition.