Adaptive PCCI with Variable Orifice Injector for Low Cost High Efficiency Clean Diesels

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• Clean
• High Efficiency
• Low Cost
Clean In-Cylinder Combustion with Low Cost, High Efficiency

Key Enablers:
- **MVCO Injector**
- **Dual-mode PCCI**
- **Novel Chamber**  
  (patents issued & pending)

1. **Micro-Variable Circular Orifice (MVCO) Injector**
   - Variable Spray Angles
   - Variable Spray Patterns
   - Enable Optimization at Each Speed and Load Points

2. **Adaptive Dual-mode PCCI**
   - Flexibility for different loads & modes of combustion;
   - Reduces chamber wetting;
   - NOx, HC, CO, Soot reduction
   - LTC;
   - High Efficiency;
   - Controlled fast reaction;
   - ‘On-demand’ EGR

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