



Idling Myths

How Much is Enough?

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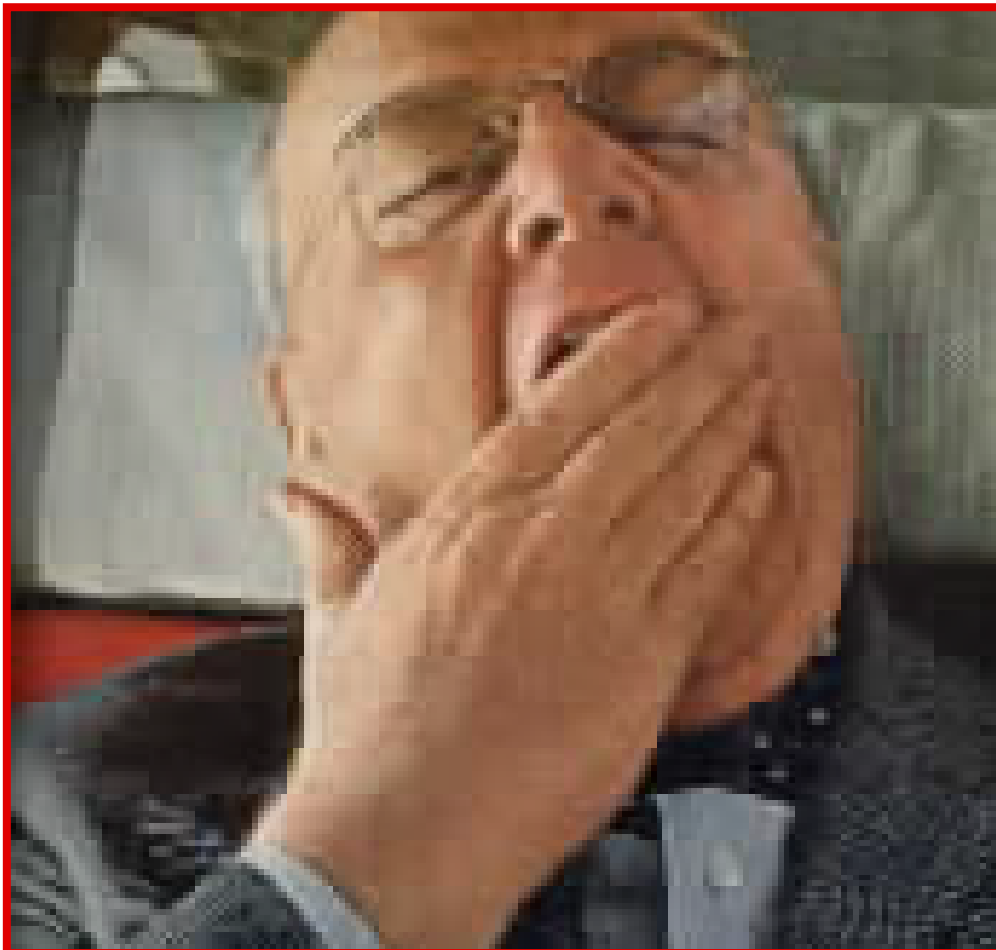
Topics

- **History: It all started out good.**
- **Who started this practice?**
- **Myths.**
- **Impacts on the engine from idling.**
- **How much is enough?**
- **New Technologies to reduce idling.**
- **Q & A .**





Interest in Emissions?





How did this nasty habit start?

- 1932 First Diesel Powered Truck
- Massive diesel engines had very high parasitic loads
- Engine oils were heavy and created “drag” when cranking
- Static injection timing made diesels poor starting engines
- Heat was needed for compression and ignition





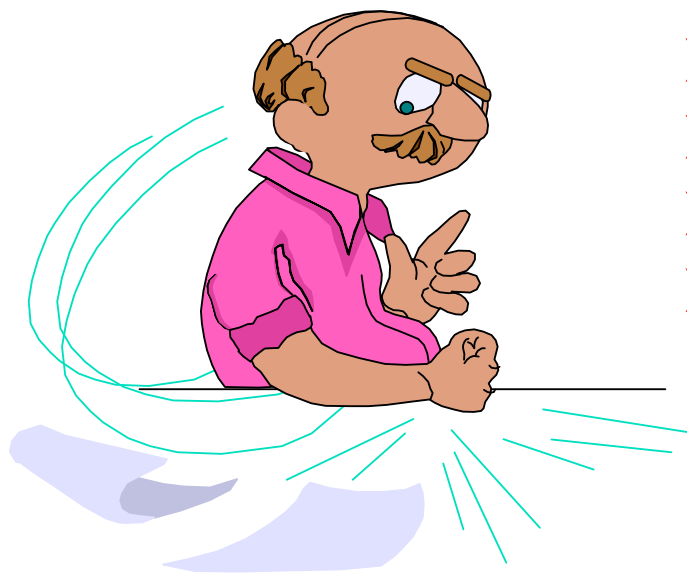
How did this nasty habit start?

- Poor batteries & cranking systems did not guarantee the next start
- Fuel was cheap
- Cab heat was poor
- Air Conditioning Option
- Air brake storage tanks leaked
- Solution: “Just let it idle”.





Who started it?



- The owners – needed reliable deliveries
- The manufactures – poor starters
- The industry “experts” – created fear
- Operators – truck stop myths and tales.





Myths

- ❌ **Diesels must idle or they won't restart**
- ❌ **Diesels create more heat by idling**
- ❌ **Diesel don't burn much fuel at idle**
- ❌ **Its good for the engine to idle it**
- ❌ **Idling at low RPM will cause damage**
- ❌ **The neighbours don't mind .**





Impacts of engine idling

- It's a fuel economy penalty = 2.5 – 4.5 litres per hour
- It's the most inefficient mode - emissions
- Fuel contamination of lube oil is high at idle
- Cylinder wall wear is accelerated by “wash down”
- Short term idling actually “over cools” the engine
- Engine life can be reduced by up to 20%
- 500 hrs of idling = 64000 miles of wear
- Noise emissions.





How much is enough?

- **Realistic goal of 10% or less**
 - 3-5 mins. only after a hard pull (temp stabilization)
- **Poor Example:**
 - 30% Idle (non revenue generating time)
 - 888 gals burned at idle
 - Idle cost for fuel only @ \$3.64 / gal = \$3232.00
- **Good Example:**
 - 7% Idle (non revenue generating time)
 - 256 gals burned at idle
 - Idle cost for fuel only @ \$3.64 / gal = \$932.00





New Technologies

- ✓ **Owner & Driver Education “Best”**
- ✓ **Driver can adjust low idle speeds 600 – 800 RPM**
- ✓ **Electronic torque limiting when vehicle is not moving**
- ✓ **Programmable Idle Shutdown = 3 – 60 mins.**
- ✓ **Electronic Driver Reward Systems = rewards for good behaviour with more speed or horsepower**





New Technologies

✓ Idle Control Systems:

- Does not require a driver in the vehicle
- Automatically starts and stops the engine at idle
- Goal is to maintain block temp of 16 C in cold temps (49 C oil temp)
- Maintain a minimum battery voltage for starting (12.2 volt activate)
- Maintain a pre set “sleeper” temperature .





New Technologies

- ✓ **High Output Block and Oil Pan Heaters**
- ✓ **Auxiliary Gensets 4-5 kW, runs AC, Heater & Accessories**
- ✓ **Diesel fired heating systems, cab, engine & sleeper**
- ✓ **Cylinder cut out technology**
- ✓ **Introduction of ULSF & Diesel Particulate Filters .**



Summary

- ☹️ Idling wastes fuel
- ☹️ Idling reduces engine life
- ☹️ Idling generates harmful emissions
- ☹️ Idling is a revenue negative operation
- 😊 Idling can be minimized .





My last words...

Diesels have made great progress compared to 1970

Today's Heavy Duty Truck Diesel:

- 👍 **100% more power**
- 👍 **50% better fuel economy**
- 👍 **400% longer engine life**
- 👍 **Costs 50% less in constant dollars**
- 👍 **Most importantly it has 90% reduction in exhaust emissions .**





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