

Tower Oil & Technology Co.



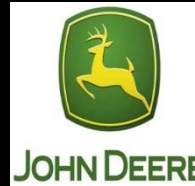
*Engineered Solutions -
Bottom Line Results*

A Time Tested Company

- Tower Oil Co. started on October 5th, 1933 by Al Simon, Sr. principally selling motor oils to local delivery firms and trucking companies.
- Expanded business into industrial accounts – primarily machine lube oils and hydraulic fluids. **Major customers included:**
 - ★ Westinghouse – Filter / Precipitron Oil for Allison, Div. of GM
 - ★ Wilson Sporting Goods – Neats Foot Oils for leather treatment
 - ★ Florsheim Shoes – Industrial sewing machine oil
 - ★ Automobile Dealerships – motor oils & air compressor oils
- Provided Technical expertise since WW II
- Early 1950's earned Industry respect for our metalworking lubes expertise
- Became an ESOP Company (Employee owned) in 1994
- 1970 - 75% of our business **Lube oils** - 25% **Metalworking**
- 2014 - 95% of our business **Metalworking** - ~5% **Lube oils**
- Majority of our business is handled within the United States and supported by our direct Field Sales Engineers, however, we also sell products to customers around the World...*recognize anyone?*



3M Worldwide



We're not your typical "Oil Company", our Mission Statement says it BEST:

Tower Oil & Technology Co.
provides the ***greatest total value*** in
metalworking fluids.

We develop and manufacture quality
products formulated with careful consideration for
safety, health and the environment.

We help improve the profitability of companies that
perform metal-cutting and metal forming operations.

We provide superior hands-on technical
expertise in the application of quality metalworking
lubricants, rust preventives and cleaners.

Unique Engineering Expertise

- The typical Tower Oil Technical Support Representative has nearly 20 years of “hands on” experience in manufacturing & engineering
- They work as a Team with other Tower engineers to bring a vast array of problem solving expertise to your specific application
- Our applications engineers routinely work closely with the Tower Technical Department to develop customized products and systems for specialty processes
- We take great pride in our employees, for they are Tower Oil's greatest asset

We focus on the Big Picture

- Decrease Lubricant Consumption Plant Wide
- Increase the useful life of ALL process fluids
- Improve application methods
- Reduce waste disposal costs
- Improve or eliminate cleaning operations
- Promote safety in the work environment
- Increase production levels



Tower Product Lines

- Metalforming Lubricants

- ◆ *Drawing & Stamping*
- ◆ *Roll Forming*
- ◆ *Tube Mills*
- ◆ *Tube Forming*

- Metalremoval –

- ◆ Cutting & Grinding Fluids

for turning, milling, drilling, tapping, grinding, etc.

- Corrosion Protection

- Specialty Products

- ◆ *parts washing chemicals*

Metalforming Lubricants

- Compounded Straight Oils
- Vanishing Oils
- Chemical Solutions
- Micro and Macro-emulsions
- Complex Soap Solutions
- Pastes



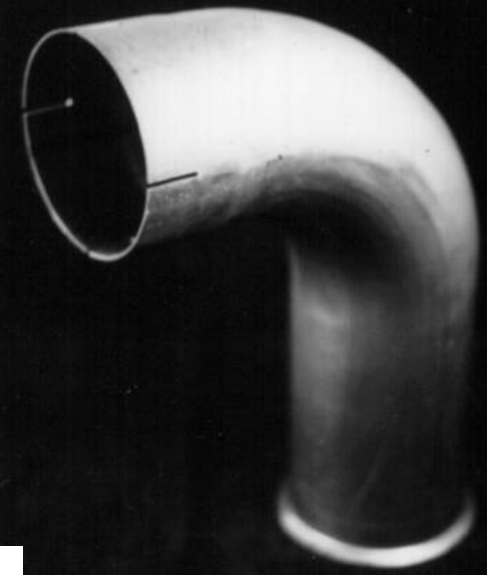
Metalremoval Lubricants - Cutting & Grinding Fluids

- Compounded Oils
- Soluble Oils
- Semi-Synthetics
- Full Synthetics
- Vegetable Oils



Specialty Products

- Tube Bending Lubricants
- Rust Preventatives
- High-Temperature Chain Oils
- Molyfilm Lubricants
- Synthetic Oils
- Cleaners



Operations

- Two buildings – approx. 40,000 sq. ft. combined
 - located near Midway Airport, Chicago, Illinois
- R&D Laboratories, Manufacturing, Technical, Engineering, and Sales



Efficient Facilities

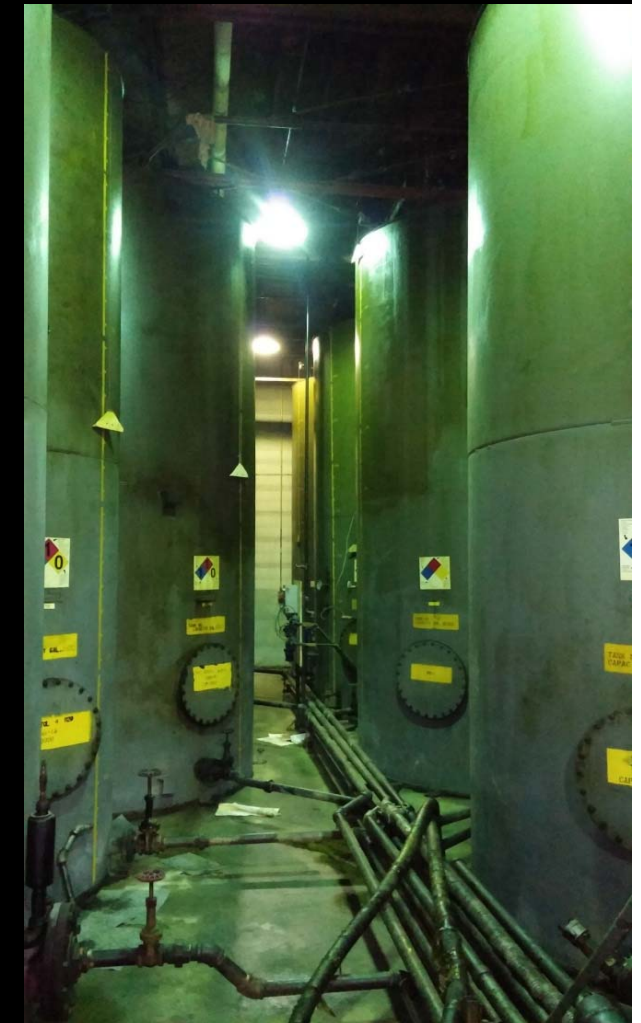
- Blending capabilities range from 8,000 gallon tankers to 5 gallon containers.
- Unique blending area allows for consistent quality, time & time again, regardless of quantity.
- Our manufacturing facility has the ability to receive or ship goods by truck and railcar



Bulk Storage

Finished Goods & Raw Materials bulk tank storage capacity is over 500,000 gals.

Four 30,000 gallon outside storage tanks



Product Development

- Two Fully Independent On-site R&D Labs
- Quality Control Lab
- ISO 9001-2008 Registered
- Chemists & Techs combined have over 75 years formulating experience



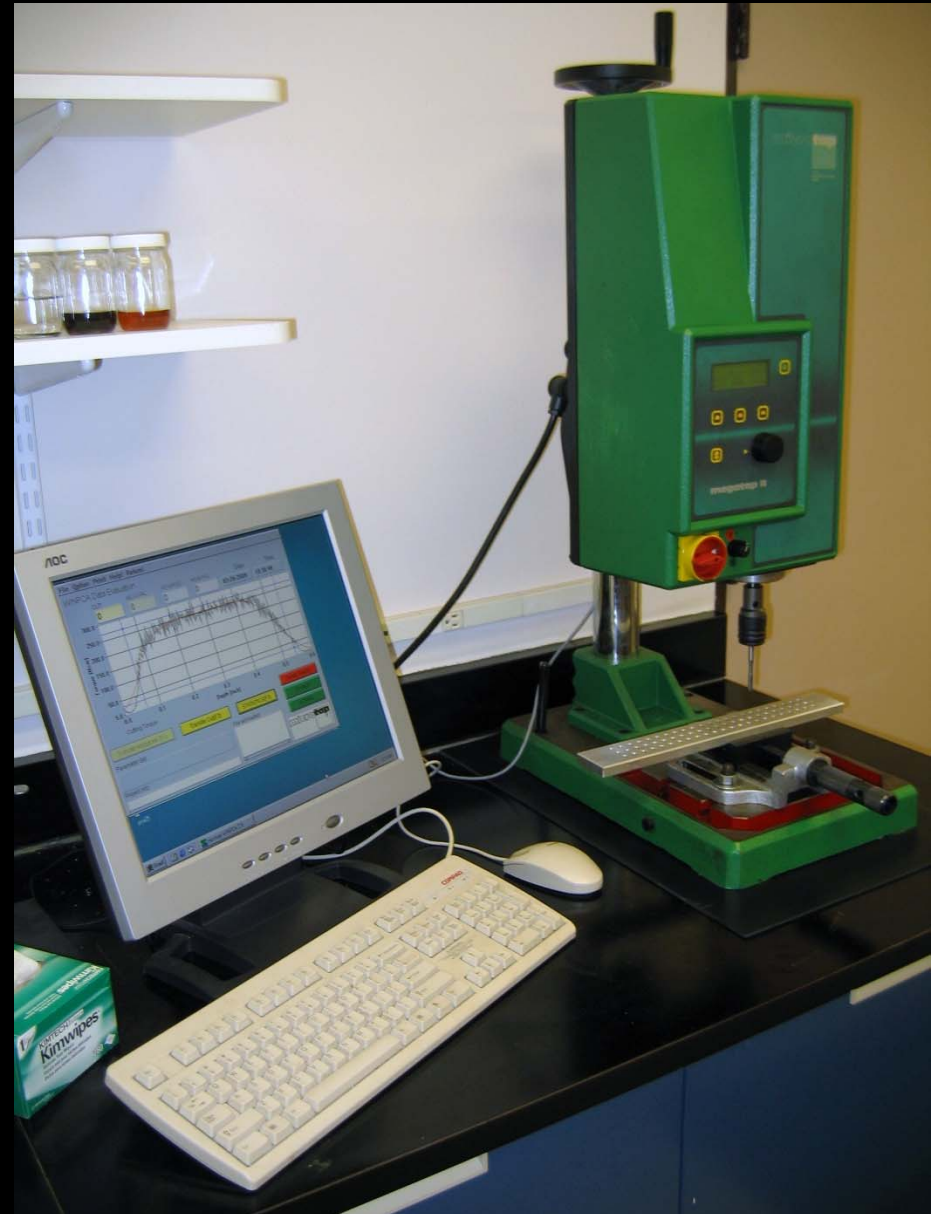
Laboratory Support

- ***Twist Compression Tester*** – one of only twelve in the US, provides valuable data of load carrying capabilities and slip values on experimental “Metal Working Lubricant” formulas



Laboratory Support (Continued)

- ***Micro Tap Torque Tester*** –
The Tapping torque test is a quantitative measure of the lubricity performance of metalworking fluids. It has an ASTM standard method designation of D5619. It is an excellent method of discriminating MWF product machining performance in the laboratory.



Tower's Reputation-

Proven Results

- What We've Done So Far:
 - ◆ Improved Operator Safety
 - ◆ Improved Manufacturing Processes
 - ◆ Introduced Environmentally Friendly Products
 - ◆ Reduced Costs
 - ◆ Provided Superior Service
 - ◆ Increased Tool Life
 - ◆ Eliminated Secondary Operations

The Tower System: *Case Histories*

Engineered solutions –

Bottom Line Results :

Tier II Automotive Stamping Plant

- Replaced a Soluble Oil with a pure Synthetic – *Klenedraw W-4801*
 - ◆ Safer for the Operators
 - ◆ Better for the Environment
 - ◆ Use Less – reduced consumption by *12%*
 - ◆ Eliminated Secondary complaints
 - ❖ Paint Problems
 - ❖ Welding
 - ❖ Rust



Engineered Solutions -

Bottom Line Results -

- Tube Bending Facility -

- **Challenge:** Eliminate washing of processed Tubing prior to welding.
- **Answer:** *Bend-All 002*
 - ◆ Tubes welded directly from bender without smoke (*no oil*)
 - ◆ Improved weld quality
 - ◆ Cleaner piece parts, equipment and manufacturing area
 - ◆ Improved operator acceptance

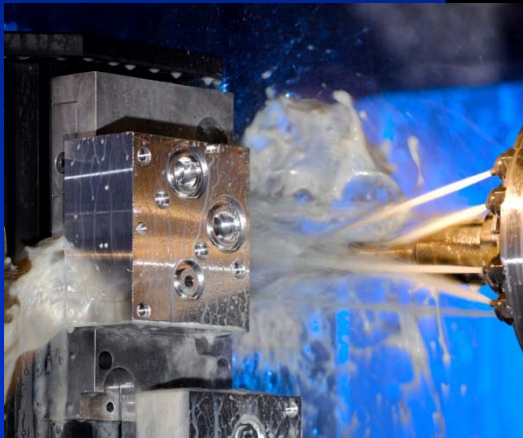


Engineered solutions –

Bottom Line Results :

- Tube Mill Application -

- Replaced a Semi-synthetic (oil) with a pure synthetic – **TOWERKEM 576**
 - ◆ No Oil
 - ❖ Better For The Environment
 - ◆ Superior Cooling
 - ◆ Cleaner Parts
 - ❖ Less Carry Out
 - ◆ Weld Through Without Smoke
 - ◆ Longer Sump Life
 - ❖ Recyclable
 - ❖ Most Bio-Resistant
 - ◆ Easier to Wash Off

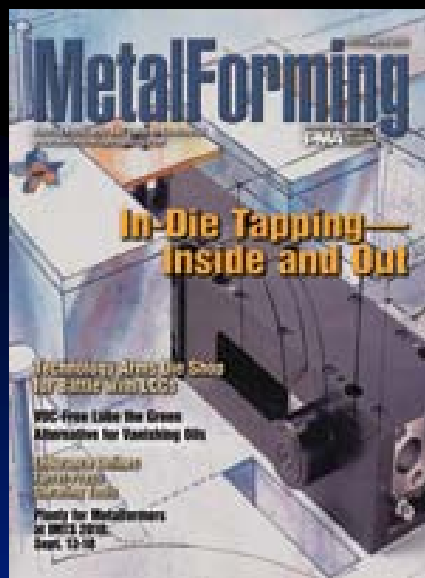


Engineered Solutions -

Bottom Line Results -

- Leading Appliance Manufacturer -

- **Challenge:** Reduce VOC's with current solvent based vanish oil
- **Answer:** *Saf-T-Vanish Series - #125 & #133*
 - ◆ 100% VOC Free Vanish Fluid – removed VOC's from stamping operations!
 - ◆ Parts now dry faster and are cleaner than with previous solvent based product
 - ◆ Increased Tool Life
 - ◆ Eliminated all solvent odors
 - ◆ Significantly reduced plant fire hazard and insurance premiums
 - ◆ Improved overall plant and operator safety



Whirlpool Pressroom Goes Green

The switch to a VOC-free lubricant reduces consumption while improving the pressroom environment—an operations and management honeymoon that should last a lifetime.

One of the world's largest appliance manufacturers did not hesitate to jump at the opportunity to take advantage of a new vanishing oil developed for lubricating stamping dies. Since late in 2009, the Whirlpool Corp. plant in Amana, IA, has been using a VOC-free lubricant (Saf-T-Vanish, from Tower Oil & Technology Co.) in place of a conventional vanishing oil made with a hydrocarbon petroleum distillate.

VOCs contribute to indoor air pollution, smog and ozone, and some areas of the United States have been classified by the Clean Air Act as "ozone non-attainment areas," where VOC emissions are strictly regulated and require costly reporting and permitting. Along with this major environmental feature, Saf-T-Vanish also has proven to be more operator friendly and offer improved lubricity, say Whirlpool officials, and it dries faster than did its conventional vanishing oil, while also being nonflammable.

Four Years in the Making

Tower Oil began to develop the new lubricant early in 2006 in an effort to

find a replacement for petroleum distillates used in vanishing oils. The efforts paid off when, on January 1, 2010, Rule 1144 in Southern California went into effect banning the use of vanishing oils whose VOC content exceeds 50 grams/l and rust preventives whose VOC content exceeds 300 gram/l.

Whirlpool had been using a conventional vanishing oil in its metal stamping department for more than 40 years. When Saf-T-Vanish became commercially available in mid 2009, the Amana plant quickly set up a trial run. Two of the most critical and high-production progressive dies were selected for initial evaluation of the new lubricant. One of the first observations: The lube evaporates more quickly than did the previous vanishing oil. And, its lubricity also was better, allowing the plant to reduce the frequency of its spray application. As a result, less lubricant is required to

The Whirlpool refrigerator plant uses its new vanishing oil in presses up to 800 tons on progressive dies running hot-rolled steel as thick 0.090 in., electrogalvanized steel (shown here) 0.015 to 0.045 in., and 0.035-in. aluminum.

achieve the same sheetmetal flow and die protection.

The press test proved successful, with both dies running high-quality parts at the required production rate without scrap. And, press operators liked the new lube. Piece parts made with Saf-T-Vanish were run through the entire manufacturing process without any issues, and management decided to switch lubricants.

Since then, the plant has significantly



Engineered Solutions -

Bottom Line Results :

- CNC Machining Plant -

- **Problem:** Complaints about coolant odors, poor sump life and dermatitis.
- **Answer:** SAF-T-COOL 458
 - ◆ Improved sump life from several weeks to over one year
 - ◆ Improved overall tool life by 78%
 - ◆ Eliminated Operator Skin Problems
 - ◆ Improved piece part finish & quality
 - ◆ No more complaints about the smell
 - ◆ Vastly improved shop morale
 - ◆ Consolidation: Replaced all three former coolants to just one – Saf-T-Cool 458



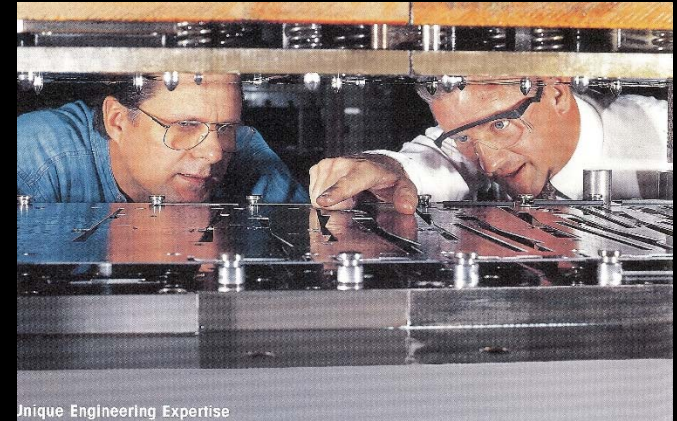
Engineered Solutions -

Bottom Line Results -

- **Challenge:** To expand our knowledge and address the ever changing concerns of Industry
- **Answer:** ***Flexibility!***
 - ◆ From Compounded Oils to more Water Extendable Products
 - ◆ ***Green Fluid Technologies***
 - ◆ Biodegradable Products
 - ◆ New Synthetic Chemistries
 - ◆ ***"VOC"*** Free Vanish Oils
 - ◆ Formulating with renewal resources
 - ◆ Optimizing Fluid Application Techniques
 - ◆ Improving Fluid Monitoring – extending the life of fluids
 - ◆ Providing for a "Cleaner Environment"

Partner with someone who:

- provides expert service on a regular basis
- carefully considers operator safety
- is aware of your environmental concerns
- produces quality product
- has a good understanding of your metal forming operations
- cares about your company and your company's future



Thank you...

Are there any questions?



Tower Oil
& Technology Co.

773-927-6161

www.toweroil.com