



CORNELL CAPA

These gloved hands are placing sensitized film on a radioactive piston. This produces a "radio autograph," from which Shell can study the effect of deposits on top performance.

## BULLETIN:

**Super Shell with 9 ingredients now contains 1 quick-start component; 1 fast warm-up ingredient; 1 mileage booster; 1 anti-knock mix; 2 octane boosters; 1 gum preventive; 1 anti-icer and new improved TCP—to give your car top performance**

**Read the facts about the remarkable formula of today's Super Shell. You'll learn why every one of these *nine* ingredients is essential if you want top performance from today's "critical" engines.**

ENGINES ARE MUCH more finicky than they were even a decade ago. That's why your car *needs* every one of the nine ingredients in today's Super Shell.

Test drivers, noted for conservative statements, go so far as to call many recent engines "critical." In fact, many will tell you that you probably do not know how good your car's engine really is, simply because it may be running well below peak efficiency. Today's Super Shell gasoline is designed to help correct this state of affairs.

Read on if you want to learn exactly how each of the nine ingredients in Super Shell helps every car deliver its best. Shell's own

test drivers call it *top performance*.

**1. The quick-start component in Super Shell is so volatile it's kept underground.**

The Butane in today's Super Shell is like the priming charge in a shotgun shell. Its quick-firing volatility is what gets you started fast on cold days. Quick-start Butane, in fact, vaporizes so easily that it is kept under pressure—22 million gallons of it—in a specially dug cavern, 40 stories underground!

Because of Butane, your engine can start in seconds. You save your battery. You don't waste gasoline by pumping, pumping, pumping raw fuel through your engine before it finally catches.

**2. The fast warm-up ingredient in Super Shell acts like kindling for a fire.**

The fast warm-up you get with Super Shell comes from its Pentane mix. Pentanes are "kindling" molecules—split from heavier hydrocarbons. They release their energy quickly, giving you top cold-weather performance in a hurry.

**3. The mileage booster in Super Shell owes its energy to carloads of platinum catalyst.**

Shell uses eight million dollars' worth of platinum catalyst to produce Platformate, the extra-energy, extra-mileage ingredient in today's Super Shell. But fortunately for you and for us, this precious stuff can be used over and over again.

The platinum catalyst, which gives the Platformate its odd name, helps to re-form petroleum into super-energy components—such as benzene, xylene and toluene.

These three alone release 11 per cent more energy per gallon than the best 100-octane aviation gasoline.

But make no mistake. This is not untamed energy. Far from it. The super-energy of Platformate is harnessed by the eight other ingredients in Super Shell, where it behaves so well you scarcely know it's there. That is until you note your extra mileage. After that, there is no doubt.

**4. The anti-knock mix in Super Shell is so effective that one teaspoonful is enough to treat a gallon.**

The human ear is nowhere near sensitive enough when you're trying to detect the slightest trace of knock. Shell scientists depend instead on an astonishing set of instruments that registers the faintest knocks on a delicate picture tube, and then photographs it with a high-speed camera.

The result—information which has enabled Shell scientists to prescribe an anti-knock mix so effective that one teaspoonful per gallon of gasoline is enough to raise the

octane rating by five full points.

**5. & 6. Both octane boosters in today's Super Shell have a story. One is linked with Jimmy Doolittle. The other comes from heating petroleum to 900 degrees.**

Jimmy Doolittle helped pioneer the first of these high-octane ingredients for Shell aviation fuel. It is called Alkylate.

Alkylate—which took the dream of 100-octane gasoline out of the lab and put it into the sky—is now in Super Shell. It controls knocking in hot engines at high speeds far better than anything else yet available.

*NOTE: Speaking of knock-control at high speeds, remember that car engines often turn faster than the engines of a DC-7.*

The second octane-boosting ingredient is "cat-cracked" gasoline for power with a purr. This is petroleum that has actually been cracked under 900-degree heat and catalytic action. Its heavier molecules have been shattered into livelier, lighter ones.

The result is a super-octane ingredient that asserts its authority the moment you put your foot down.

*NOTE: "Cat-cracking" refers to the use of a catalyst—the mysterious substance that can alter molecules without changing itself at all.*

**7. The anti-gum ingredient in Super Shell uses a chemical "policeman" to guard against gum-fouled carburetors.**

Even the purest gasoline can form gum when stored. This gum clogs carburetors and fouls automatic chokes. But, with Super Shell, you needn't worry, since a special gum preventive does the trick.

It acts like a policeman controlling a mob. Regulates unstable elements to help keep them from clotting. Hence no gum problem.

**8. The anti-icer in Super Shell takes care of the most mysterious stalls of all.**

Super Shell's formula is adjusted as often as eight times a year to beat the weather. For example, whenever the temperature is

likely to drop below forty-five degrees, an anti-icer is added.

*Why add anti-icer at forty-five degrees?* Because, even then, frost can form in your carburetor just as it does in your refrigerator. It can choke your engine dead. And you might never suspect what did it.

Super Shell's anti-icer tackles the problem by discouraging ice from sticking to metal parts. Result: you can forget about any carburetor icing problems.

**9. TCP in Super Shell increases power, mileage and plug life.**

In 1953, Shell first introduced TCP—a revolutionary additive that neutralized certain harmful effects of combustion deposits. Today, Shell has developed a new improved TCP, called *cresyl-diphenyl-phosphate*.

TCP can give your car as much as 15 per cent more power and up to 17 extra miles per tankful. It can also make spark plugs last up to twice as long.

Ponder these statistics. They can have a refreshing effect on your car bills.

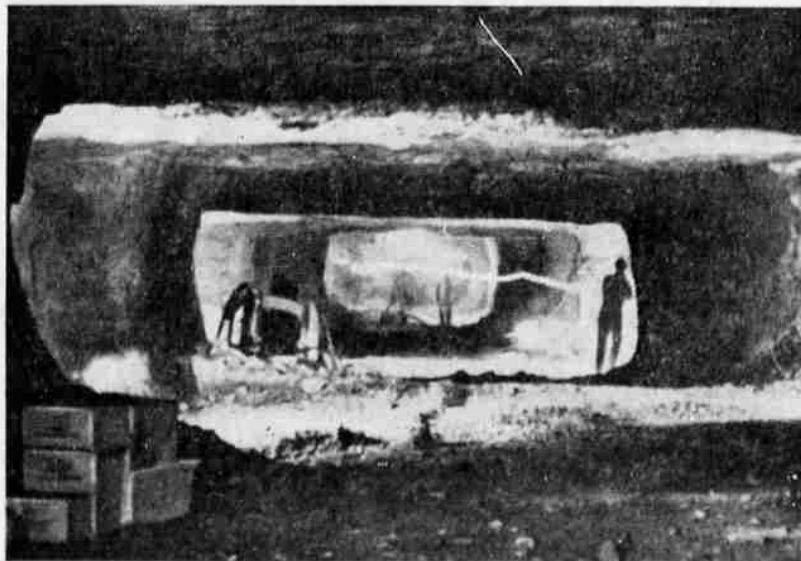
**Test Super Shell for yourself**

Try today's Super Shell next time you fill up. You'll soon feel and hear a difference in the way your engine runs.

That difference is *top performance*.



**A BULLETIN FROM SHELL RESEARCH**  
—where 1,997 scientists are working  
to make your car go better and better.



Shell's Butane Storage Cavern at Wood River, Illinois. Some 230,000 tons of rock were removed through a pipe only 42 inches wide. This tiny entrance posed quite a problem when getting a bulldozer down. Shell's solution? Cut the bulldozer up and weld it together again down below.