

STITT

RUNNING

TIMES²

2,000 HOURS STILL RUNNING

STITT S-AG80BEX13-2 one-piece, extended-length spark plugs and STITT USL2C-24A safety-shielded, secondary leads being operated at a natural gas plant in Silsbee, Texas.

Engine is a V-12 cylinder, pre-combustion chamber Waukesha® L7042GL. Engine is driving a compressor at 980 rpm.

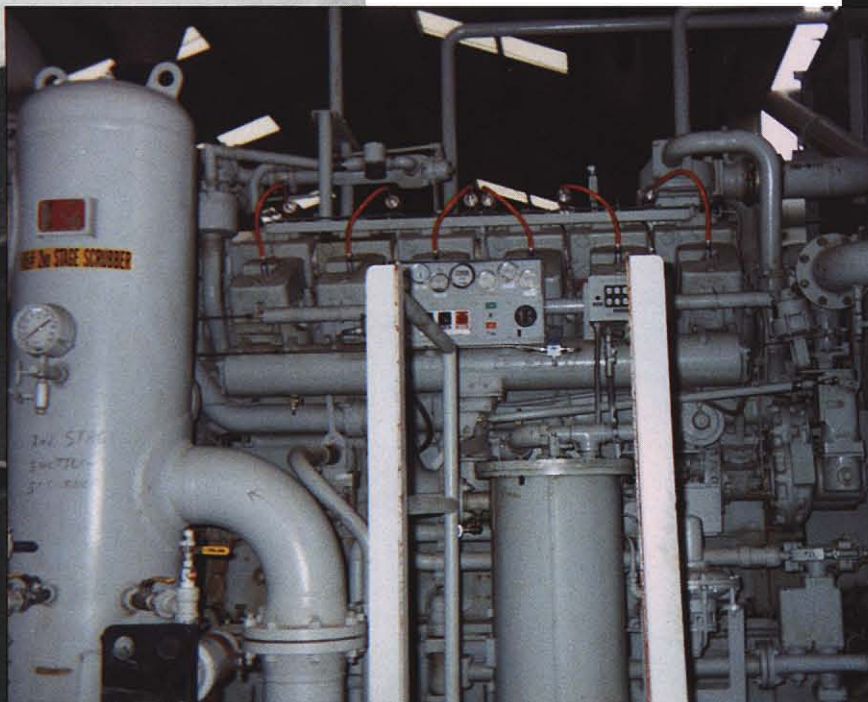
This engine has a cylinder head design that requires the spark plug to be fitted into the combustion chamber at the bottom of a deep spark plug well. Using a more conventional, little spark plug (Cooper Champion® RTM77N) and a plastic insulated, integral, ignition coil, spark plug life had been limited to approximately 800 hours. The reasons were obvious: short flashover distance, rapidly thermally distressed plastic insulation, combustion gas leakage around the external seat gasket, and egress into the spark plug well of such conductive contaminants as lube oil (from rocker splash and failing spark plug well seals), combustion gas leakage condensation, and engine wash water entering the spark plug well.

Our one-piece, extended-length, Annular Gap design spark plug provides this longer life because it successfully eliminates all the environmental and design flaws that shorten the life of the short spark plug in the bottom of a spark plug well. And our Annular Gap design maximizes spark gap surface area while furnishing the shortest possible thermal paths for the optimum in combating electrode erosion rates.

1. LONGEST POSSIBLE FLASHOVER LENGTH.
2. ELIMINATES THE REUSE OF THERMALLY COMPROMISED, PLASTIC, INTEGRAL IGNITION COILS.
3. ISOLATES THE SECONDARY CIRCUIT FROM ENVIRONMENTAL CONTAMINANTS.
4. OFFERS HANDS-ON INSTALLATION.
5. THE STITT SOLUTION IS THE LEAST EXPENSIVE METHOD OF OPERATING THE DEEP SPARK PLUG WELL ENGINE.

STITT®

STITT SPARK PLUG COMPANY



1. LONGEST POSSIBLE FLASHOVER LENGTH.

No short, 18mm spark plug offers anything close to the 2.125" flashover length of the Stitt "S-___-2" series spark plugs.

It is important to note that the longer the flashover distance, the longer the spark plug can operate. Consider that at sea level, it only requires a nominal 17kV to arc a 1.00" air gap. This is comparable to the voltage required to flashover a conventional spark plug insulator of equivalent flashover length. Good, remotely-located ignition coils typically have the capability to deliver open-circuit voltages of approximately 35kV. Only these long flashover length plugs from Stitt offer a flashover dimension compatible with the output voltages available from the best ignition coils.

2. ELIMINATES THE REUSE OF IGNITION COILS THAT ARE PREDICTABLY AND RAPIDLY FAILED BY THE EXPOSURE TO NORMAL SPARK PLUG SHELL OPERATING TEMPERATURES (>365°F).

Consider that the conventional thinking dictates that the cheapest way to outfit a deep spark plug well engine for shielded ignition is to use a short spark plug (frequently replaced) and an integral ignition coil (desirably never replaced).

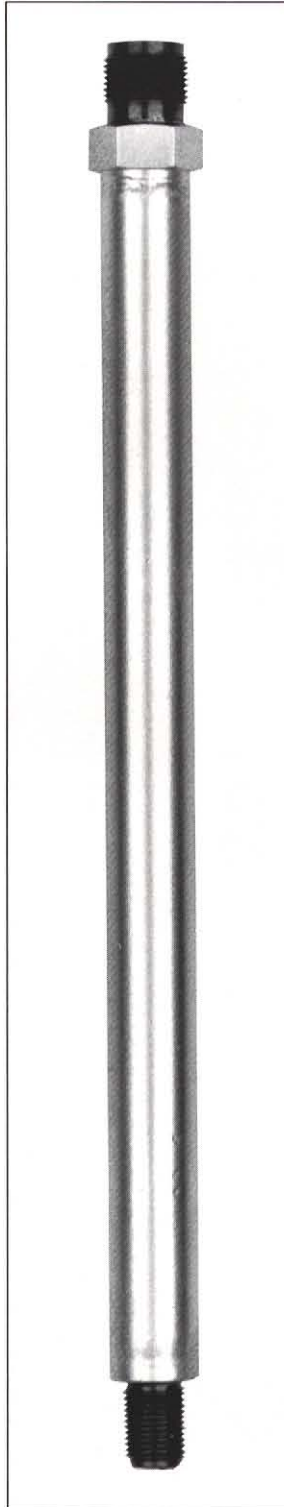
But for the critical service engine, we think the operator is not well-served by the idea of thinking that the reuse of plastic ignition coils subjected to high temperatures is a good idea. Are most engine mechanics qualified to assess the electrical characteristics of an ignition coil each time they are required to consider its reuse (i.e., each spark plug change)? We don't think so.

We think that these style engines are more reliably operated with the ignition coils remotely-located, where the temperatures will typically be below 150°F. Where the coils do not have to be removed and replaced with each spark plug change.

Our idea solves the problem of a mechanic's guessing about an ignition coil's suitability for reuse: where the coils do not have to be handled all the time. This means that spark plugs have the chance to run as long as possible at every run. Because the spark plug run times will cease to be governed by the reuse of "deteriorating through reuse" plastic-insulated, integral ignition coils.

3. ISOLATES THE SECONDARY CIRCUIT FROM ENVIRONMENTAL CONTAMINANTS.

Because of the sealed design of this configuration down the spark plug well, the ignition secondary circuit is completely isolated from the life-shortening effects of conductive materials (water, lube oil, spark plug gasket blow-by condensation) entering the spark plug well. A short spark plug will always be victimized by these environmental antagonists.



4. OFFERS HANDS-ON INSTALLATION.

Because of the one-piece, extended-length design, these plugs operate consistently longer than the short, conventional variety. One of the reasons is that this design offers the mechanic the feature of installing these plugs by hand.

Installing by hand has been the recommended procedure, always. Only this design offers the mechanic this ease of installation for the deep spark plug well application.

But only this one-piece, extended-length "S-___-2" design offers the operator a high voltage termination design that isolates the spark plug from the most routine exposures to performance-compromising handling.

5. THE STITT SOLUTION IS THE LEAST EXPENSIVE METHOD OF OPERATING THE DEEP SPARK PLUG WELL ENGINE.

No more costly than some of the short, shielded spark plugs available from Champion® in the 18mm thread size. Only a fraction more expensive than the short, conventional spark plugs. And when the running times are contrasted, the Stitt solution is the least expensive method of operating this deep spark plug well engine.

Interested in learning more about these spark plug innovations for your engines? Communicate with us and let us show you how to upgrade your operations in the most cost-effective, modern manner.



STITT SPARK PLUG COMPANY

Shipping Address:
204 N. Loop, Hwy. 336 E, Conroe, Texas 77301

Mailing Address:
P.O. Box 327, Conroe, Texas 77305

Phone: 936-756-7796 • 281-443-2279
Outside Texas: 800-231-8006
Fax: 936-539-9762
E-mail: sales@stitt-sparkplug.com
Web: www.stitt-sparkplug.com