EQUIPMENT FOUNDATION SYSTEMS

Chockfast®

Effect of Chock Design

On Foundation Operating Temperatures

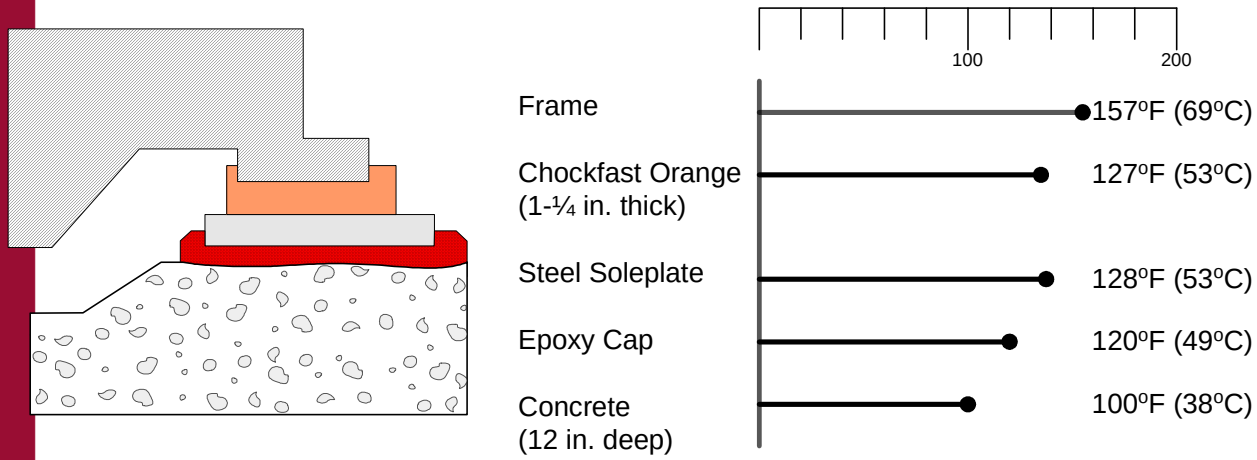
Technical Bulletin # 667A

Bulletin Description

The illustrations below list the various temperature readings monitored on two different foundation designs supporting Ingersoll-Rand KVSR gas engine compressors. Both engines were operating at the maximum RPM with a 175°F oil temperature. The compressor building ambient temperature was 75°F.

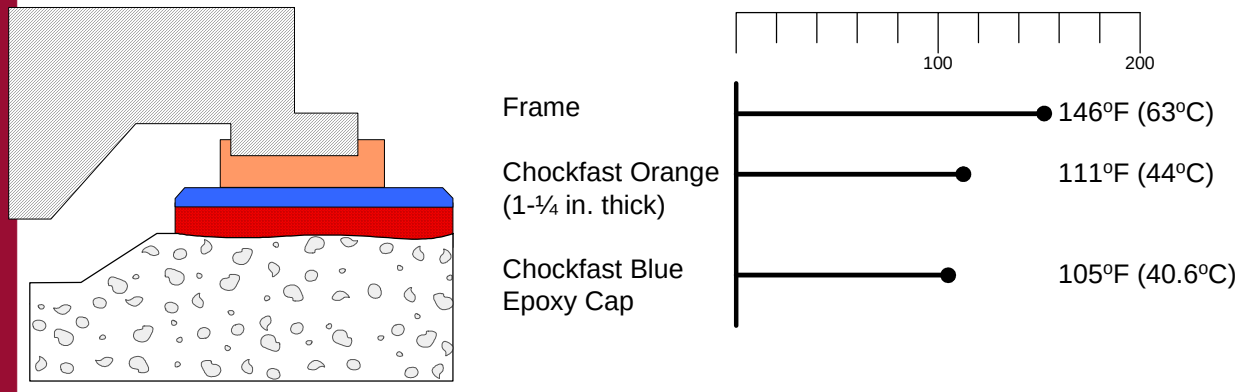
Temperatures With Resin Chocks on Steel Soleplates

The first drawing shows the temperature variation from the engine down into the concrete foundation when the engine is mounted on 1-1/4" CHOCKFAST ORANGE® chocks on steel soleplates set in an epoxy capping material.



Temperatures With Resin Chocks on an Epoxy Cap

This drawing depicts the temperature variation from the engine down into the concrete foundation when the engine is mounted on 1-1/4" CHOCKFAST ORANGE® chocks on the CHOCKFAST BLUE® epoxy cap.



The foundation design with the steel soleplates indicates a higher temperature at the epoxy chock, epoxy capping material and the underlying concrete foundation. When comparing the two drawings it is quite evident that the steel soleplate contributes significantly to the excess heat build-up in the entire foundation.. The average temperature decrease in the design WITHOUT the steel soleplate is approximately 15°F at all locations of the foundation.

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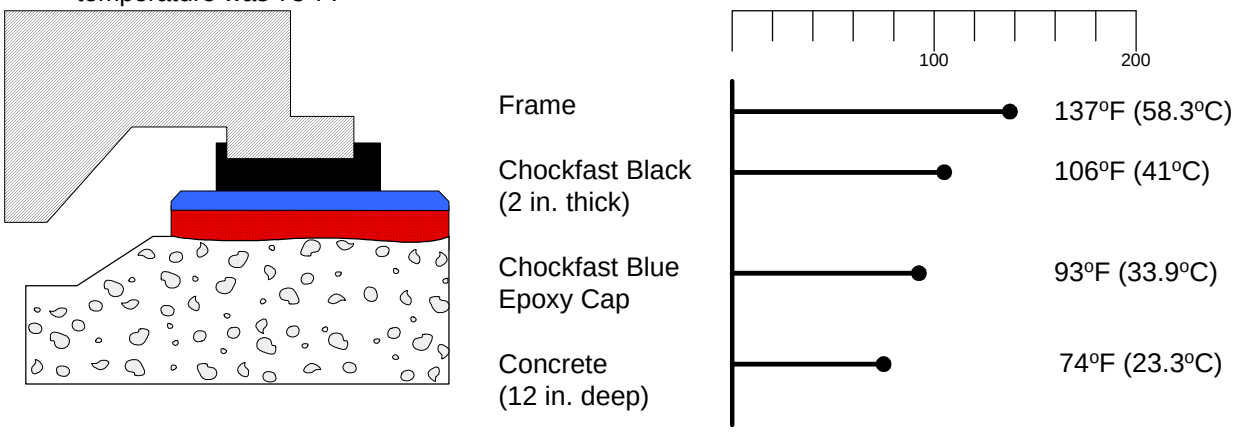
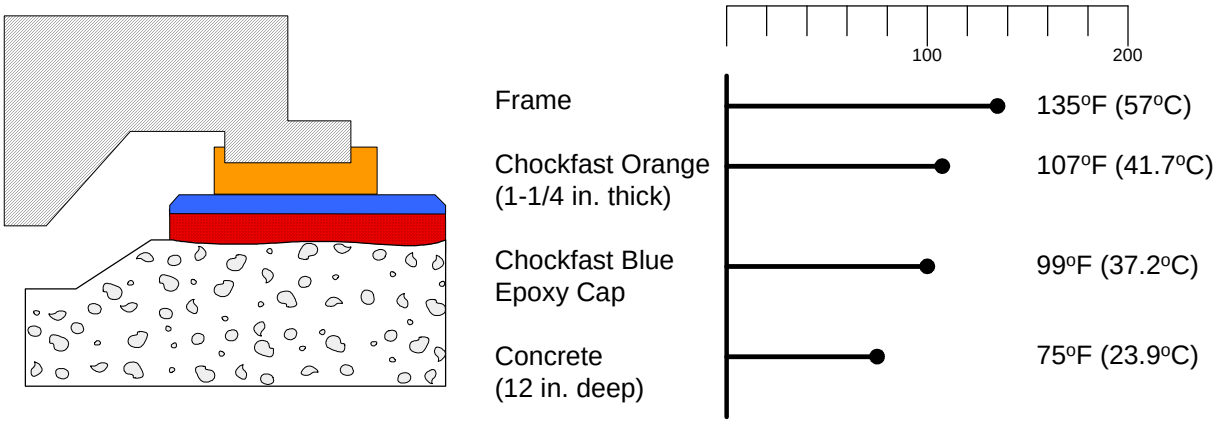
Effect of *Chock Height* on Operating Temperature

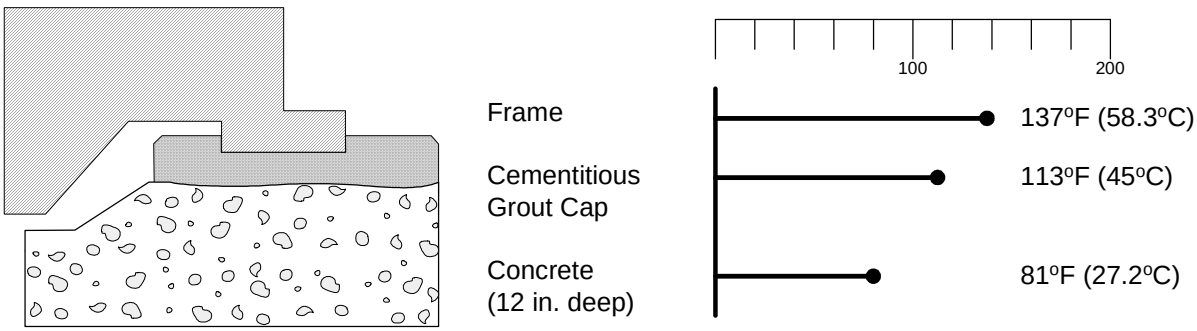
The illustrations below show the temperatures variations at different levels monitored on three different foundation designs supporting Dresser Clark HBA-8 gas engine compressors. All three engines were operating at the maximum RPM with an oil temperature of 170°F. The compressor building ambient temperature was 73°F.



The top drawing shows a 2" CHOCKFAST BLACK® epoxy chock on the CHOCKFAST BLUE® epoxy capping material while the lower drawing depicts a 1-1/4" CHOCKFAST ORANGE® epoxy chock on a cap of CHOCKFAST BLUE®.



The temperature readings in the top drawing demonstrate the added cooling effect the 2" CHOCKFAST BLACK® chocks have on the underlying epoxy cap of CHOCKFAST BLUE® which was used in both foundation designs. The CHOCKFAST BLUE® under the 2" CHOCKFAST BLACK® chocks is 6°F cooler due to the additional ¾" of air space.



The final drawing shows a full bed cementitious grout design. The cementitious grout cap is 20°F warmer than the CHOCKFAST BLUE® cap under the 2" CHOCKFAST BLACK® chocks and 14°F warmer than the CHOCKFAST BLUE® cap under the 1-1/4" CHOCKFAST ORANGE® chocks. The lack of air flow has a definite effect on the temperature of the grout cap and the underlying foundation.

Date 08/2006