

SERVICE BULLETIN

Issued: 7/23/24

SUBJECT: NGI-5000 IGNITION TIMING SETUP AND REVIEW

As an increasing number of NGI-5000 systems have been installed in the field, a number of questions have been raised regarding the initial system setup specific, inclusive of the reset pin positioning. Please see the review below for additional detail and background.

REFERENCES AND TERMS

Actual Reset pin position – Physically where the pin is mounted in relation to #1 TDC

Reset pin position on display – A read out of where the physical pin is mounted and entered by the user. Also used for calculation of retard and timing display value

Manual Retard – Manually adds in retard from the reset pin position

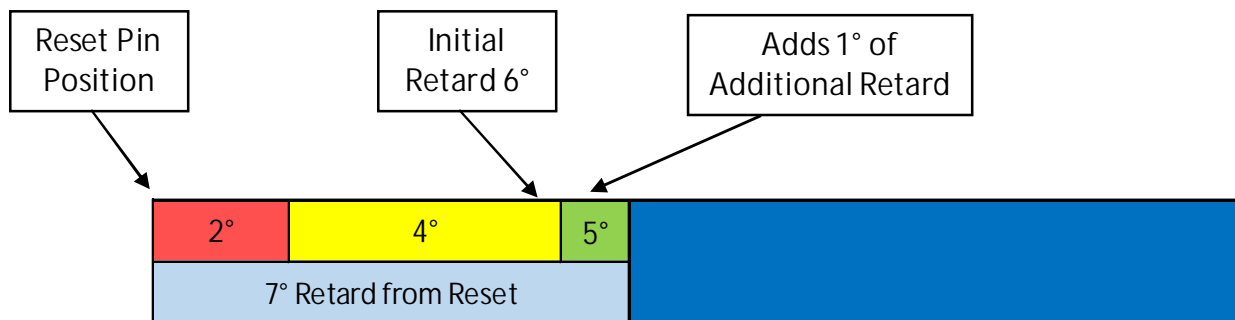
Individual Retard – Manually adds in retard to a specific cylinder from the manual retard

Insertion Retard – Retard built in from the reset position that is needed for the functionality and time delay of the processing of the signals

VERSION NOTES AND SUMMARY

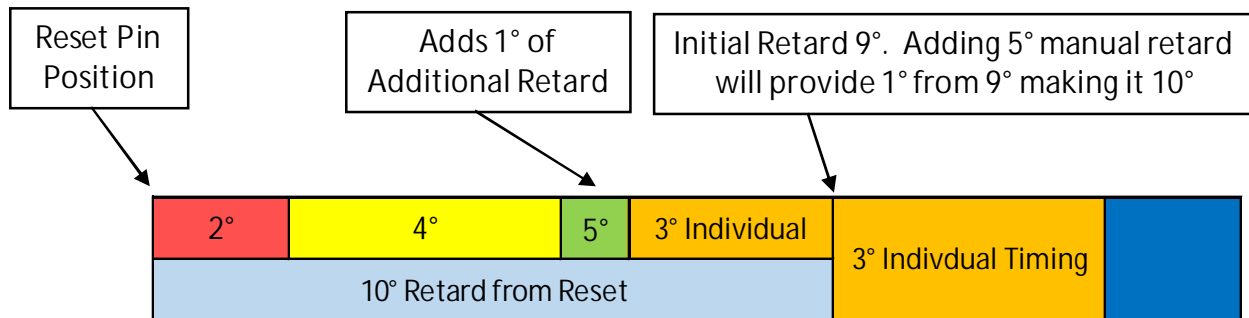
UP TO AND INCLUDING FIRMWARE VERSION 1.3 (date 10-11-23) of the Logic Module Firmware

Manual retard timing would start at 0° on the display. When making an adjustment, no change would come into effect until 5° which would add 1° of manual retard. There is insertion retard of 2° plus the reserved 4° for individual retard which is a total of 6°. Therefore, when adding manual retard on the screen 5° will yield an additional 1° making a total of 7°.



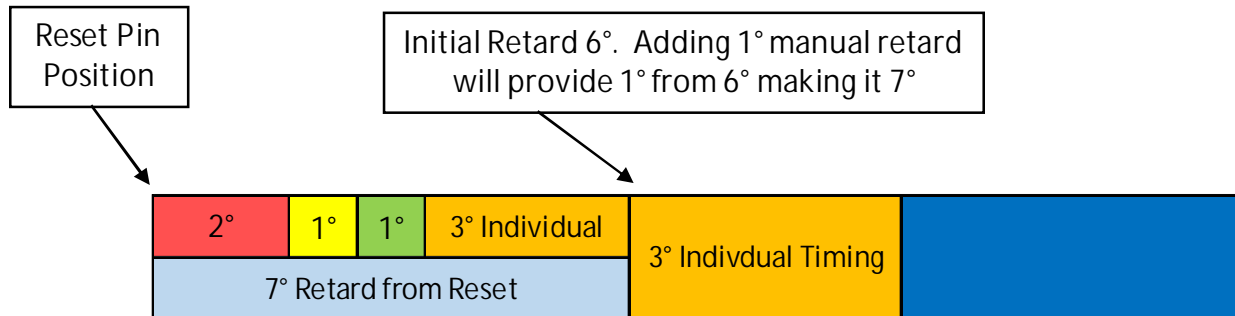
VERSION 1.4 (date 1-9-24) of the Logic Module Firmware

This release added the ability for individual timing which is $3^\circ \pm$. Upon adding this feature, it was appended after the 2° and the reserved 4° . A total of 9° is set as the starting point with no manual retard added. In version 1.4 in order to get the roughly 3° back advanced all of the individual timing must be advanced and will make the achievable retard after the reset 6° .



VERSION 2.0 of the Logic Module Firmware (PENDING RELEASE)

Version 2.0 has not been released but is in test. With regard to timing, the CPU-2000 approach has been restored. There are 6° after the reset standard starting out with no manual retard. The display reads 0 for actual 0° degrees of manual retard. When pressing the button to increase the manual retard to 1° the retard value will be increased by 1 to 7° . Taking the individual retard to -3° will make the timing for that cylinder 3° after the reset. Taking the individual retard to $+3^\circ$ will make the timing for that cylinder 9° after the reset.



We hope that this provides additional clarity on this important subject. If you have additional questions, please reach out to the Altronic Application Engineering Team at Altronic.support@hoerbiger.com.