ERRATA SHEET FOR ANSI/ASHRAE STANDARD 103-2022
Methods of Testing for Annual Fuel Utilization Efficiency of Residential Central Furnaces and Boilers

August 26, 2025

The corrections listed in this errata sheet apply to ANSI/ASHRAE Standard 103-2017. The first printing is identified on the outside back cover as "Product code: 86386 1/22".

Page	Erratum

20 **8.4.1.1 Gas Burner.** Add Section 8.4.1.1.1 and renumber the existing Section 8.4.1.1.1 as 8.4.1.1.2 as shown below.
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

8.4.1.1.1 Modulating Gas Burner Adjustment at Maximum Input Rate. For gas-fired furnaces and boilers equipped with modulating-type controls, adjust the controls to operate the unit at the maximum fuel input rate. Set the control to the maximum setting. Start the furnace or boiler by turning the safety control valve to the ON position.

8.4.1.1.2 ~~8.4.1.1.1~~ Modulating Gas Burner Adjustment at Reduced Input Rate. […]

39 **Table 8 Fuel Characteristics and Parameters for Calculating Steady-State Sensible Heat Loss ($L_{s,ss}$) and Steady-State Efficiency ($Effy_{ss}$).** The parenthesis "$)$" currently located between "$(\mathrm{CA(i)})$" and the square bracket "$]$" in the equation for *Ls,ss* should be moved after "$(\mathrm{CF(i)}$" as shown below.

TABLE 8 Fuel Characteristics and Parameters for Calculating Steady-State Sensible Heat Loss ($L_{S,SS}$) and Steady-State Efficiency ($Effy_{SS}$)

Move closing bracket

$$L_{S,SS} = \frac{100}{\mathrm{HHV}_A \times K_6} \sum_{i=1}^{5} \left\{ \left[\left[\left(1 + \frac{A}{F}\right)\left(\mathrm{CF}(i)\right) + \left(\frac{A}{F}\right)(R_{T,a} - 1)(\mathrm{CA}(i)) \right] \right] \times \langle [(T_{a,SS,X} + T_{abs}) \times K_7]^i - [(T_{RA} + T_{abs}) \times K_7]^i \rangle \right\}$$

The corrected equation *Ls,ss* is shown below.

$$L_{S,SS} = \frac{100}{HHV_A \times K_6} \sum_{i=1}^{5} \left\{ \left[\left[\left(1 + \frac{A}{F}\right)(CF(i)) + \left(\frac{A}{F}\right)(R_{T,a} - 1)(CA(i)) \right] \times \left\langle \left[(T_{a,SS,X} + T_{abs}) \times K_7 \right]^i - \left[(T_{RA} + T_{abs}) \times K_7 \right]^i \right\rangle \right\}$$

54 **11.2.11 Heating Seasonal Efficiency.** In the equation in Section 11.2.11 delete the parenthesis as shown below.

$$\left(Effy_{HS} = 100 - L_{L,A} - C_J L_J - \left[\frac{t_{ON}}{t_{ON} + (Q_P / Q_{IN})(t_{OFF})} \right] \right) \times [L_{S,ON} + L_{S,OFF} + L_{I,ON} + L_{I,OFF}]$$

The corrected equation $Effy_{HS}$ is shown below.

$$Effy_{HS} = 100 - L_{L,A} - C_J L_J - \left[\frac{t_{ON}}{t_{ON} + (Q_P / Q_{IN})(t_{OFF})}\right] \times [L_{S,ON} + L_{S,OFF} + L_{I,ON} + L_{I,OFF}]$$