OFFSET TORQUE VALUE FOR EXTENDED LENGTH APPLICATIONS

FORMULA FOR OFFSET TORQUE CALCULATION

\[ M_1 = M_2 \times \frac{L_1}{L_2} \]

- \( M_1 \) is the new torque value
- \( M_2 \) is the specified torque to be applied to the nut
- \( L_1 \) is the normal length of the wrench
- \( L_2 \) is the extended length of the wrench \( (L_2 = L_1 + L_3) \)
- Proper torque procedures should be followed when using TG-70 strap wrench.

Example:

- \( M_2 = 40 \text{ IN-LBS} \), desired torque without extension
- \( L_1 = 9.75 \text{ Inches} \), length of torque wrench measured from center of drive to center of handle
- \( L_2 = 11.55 \text{ Inches} \), total length of wrench with 1.8 inch extension added.

\[ 40 \times \frac{9.75}{11.55} = 33.7 \]

\( M_1 \) therefore = 33.7; in other words if you want to torque a fastener to 40 IN-LBS using a 9.75 inch torque wrench with a 1.8 inch torque extension you must set the wrench to 33.7 IN-LBS

Notes

1. \( L_1 \) varies with each different model torque wrench
2. \( L_2 \) changes with each shell size coupling or connector and angle from wrench drive end.