24° Flareless Bite

CONDITION	PROBABLE CAUSE(S)	RECOMMENDATION
Immediate leakage when system is pressurized	• Improper ferrule/bite ring orientation	• Reset ferrule to ensure that the leading edge of ferrule/bite ring is pointing towards end of tube and seat of the mating fitting
Additional/excessive stress apparent on bite	• Non-square tube cut; tube not being properly supported in seat of adapter	• Re-cut tube to 90° ± 1°
Flexural stresses allow tube to“rock” back and forth	• Tube not fully supported in fitting’s body seat	• Reset tube end. This time ensure that the tube is bottomed in the presetting tool or fitting body
Poor ferrule/bite ring pre-set and/or tube collapse	• Tube may be too hard; or preset pressure or torque might be too high • Tube is too thin	• Use fully annealed tube max hardness R_B 72 for steel, R_B 90 for stainless steel • Consult manufacturer's minimum tube wall thickness requirements; tube supports must be used with certain thin-walled steel or stainless-steel tube. Review preset requirements
Tube not bottoming out in fitting body	• Improper preset or wrong tool used for presetting	• In the presetting process, it is important to exert axial force on the tube to keep it fully bottomed in the tool. Check for indentation on end of the tube
Shallow bite of ferrule or cut ring into tube	• Worn preset tool • Too low preset pressure or torque • Tube too hard • Tube not bottomed against stop initially in preset	• Replace preset tool • Observe manufacturer’s recommendation for proper preset • Ensure that tube is of correct hardness or material • Hold tube against stop in preset
Tube pulls out of fitting in application and ferrule skives end of tube	• Improper preset • Tube too hard • Excessive internal pressure • Excessive axial load on tube • Inadequate make up	• Preset must be inspected for evidence of proper preset, such as raised ridge of metal in front of leading edge • Ensure that tube is of proper hardness and material • Ensure that internal pressure is within rating of fitting (tube might be of a higher rating) • Avoid additional axial load than that caused by internal pressure • Follow proper presetting and assembly procedures
Fitting nut is tight but leakage still occurs	• Overset ferrule • Cracked tube • Damaged components	• Excessive force used in presetting of ferrule can cause it not to spring back and effect a seal. Follow manufacturer’s recommendation for preset • Check tube for circumferential crack due to fatigue • Check components for damage such as nicks, scratches and cracks