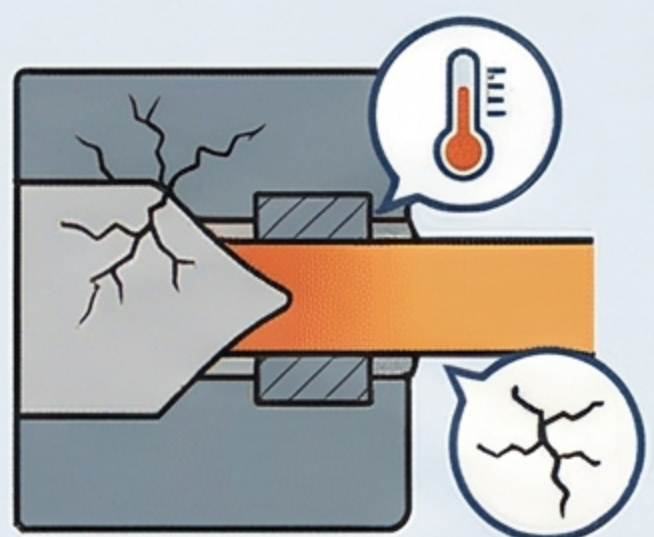


THE CARBIDE LONGEVITY BLUEPRINT: A PROFESSIONAL MAINTENANCE GUIDE FOR CUSTOM EXTRUSION DIES

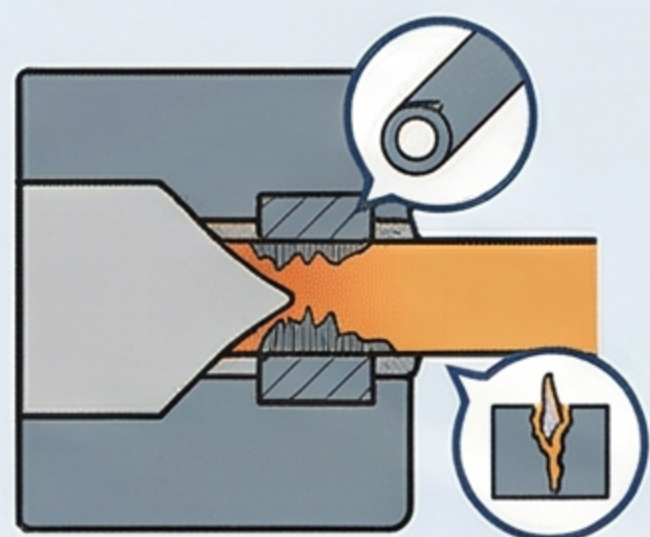
By Scott Flees

Bulls-Eye Precision, Buckley, MI

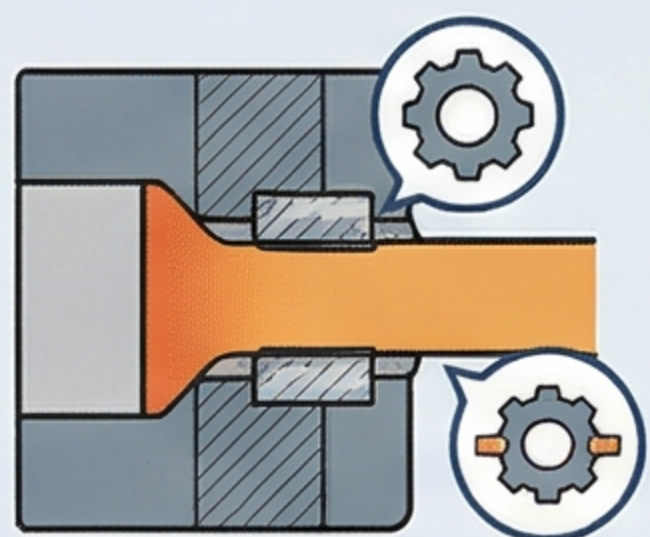
UNDERSTANDING CARBIDE WEAR: THE THREE SILENT KILLERS OF ROI



1. THERMAL FATIGUE
Localized heat from friction causes microscopic surface cracking.



2. GALLING (ADHESION)
Material “welds” to die surface, destroying the final profile finish.



3. ABRASIVE DRIFT
Continuous wear “widens” the bearing length, pushing parts out of dimensional tolerance.

SCOTT FLEES’ 4 PILLARS OF PREVENTATIVE DEFENSE



OPTIMIZE LUBRICATION: Maintain a continuous protective boundary layer to fight friction.



STRICT THERMAL CONTROL: Use proper pre-heating to avoid “Thermal Shock” that fractures carbide.

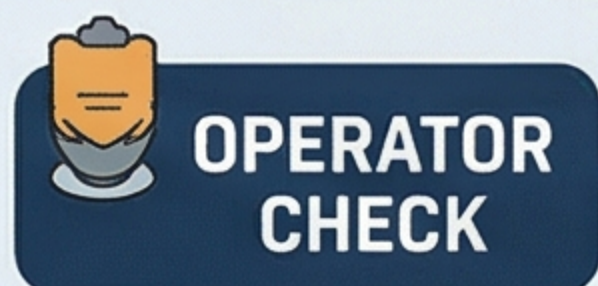


PRESS ALIGNMENT: Calibrate for perfect concentricity to ensure even wear across the die face.



IMMEDIATE CLEANING: Remove residue while warm, using non-abrasive methods.

THE ‘WARNING SIGN’ THRESHOLD: WHEN TO RESTORE OEM SPECS



OPERATOR CHECK

STOP & RESTORE

VS.

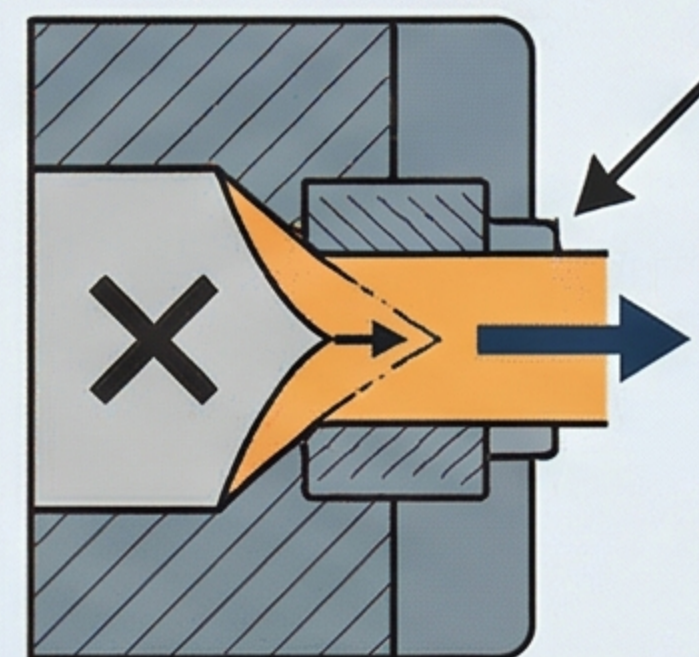
RISK CATASTROPHIC FAILURE



SYMPTOM: Dimensional Drift
DIAGNOSIS: Abrasive Wear
FIX: CNC REGRINDING

- Unplanned Downtime
- Scrapped Material
- Idled Labor
- Increased Overhead

THE TECHNICAL RED ZONE (CAUTION): MANUAL MAINTENANCE IS A GAMBLE



MANUAL POLISHING RISK: Bell-Mouthing (Altering Bearing Length)
Hand-polishing frequently alters tolerances.



CNC PRECISION GRINDING: RESTORES SUB-MICRON ACCURACY & OEM SPECIFICATIONS

