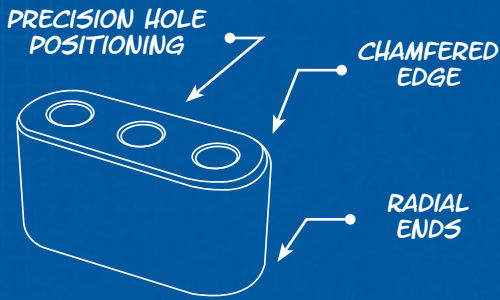


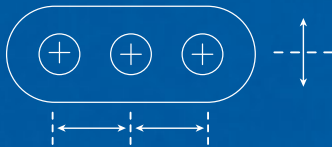
MANUFACTURING CASE STUDY



PROBLEM:

A POWER TRANSMISSION CUSTOMER WAS USING A PRECISION DRILLED MACHINE KEY AS A POSITIONING REFERENCE IN AN IMPORTANT MECHANICAL APPLICATION. THE THREE HOLES IN THE PART POSSESSED HIGHLY PRECISE TOLERANCES FOR ALIGNMENT AND POSITIONING. THE LEGACY MANUFACTURING METHOD YIELDED HIGH SCRAP RATES AND SETUP COSTS. THIS WAS DUE TO THE ACCUMULATED MANUFACTURING TOLERANCES INHERENT IN THE CONVENTIONAL PROCESS.

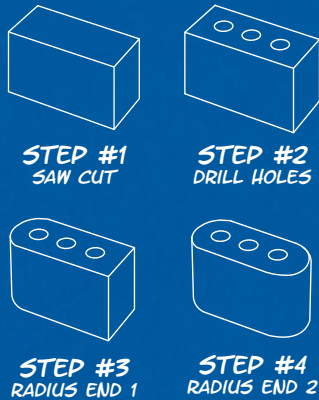
HOLES POSITIONED AND ALIGNED WITHIN 0.005"



OPPORTUNITY:

G.L. HUYETT HAS PROPRIETARY AIR-OVER HYDRAULIC MILLING FIXTURES THAT ARE SEATED ON PALLETS. THE AIR-OVER HYDRAULIC DESIGN PROVIDES HIGH RIGIDITY, CLAMPING POWER, AND THROUGHPUT. THE THROUGHPUT IS INCREASED BECAUSE THE OPERATOR LOADS PARTS WHILE THE MACHINING CENTER OPERATES.

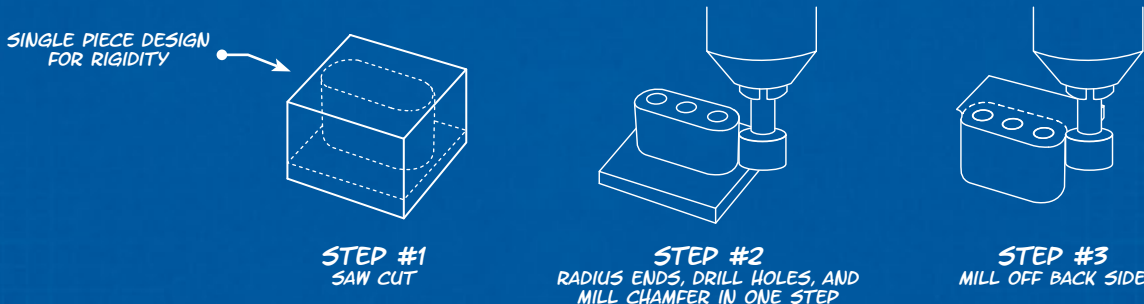
LEGACY METHOD



SOLUTION:

USING AN OVERSIZED BLANK PART, THE G.L. HUYETT MANUFACTURING TEAM DESIGNED PRODUCTION TO RUN ON THE AIR-OVER HYDRAULIC FIXTURES. THE ENTIRE KEY IS FORMED AND DRILLED FROM A SOLID PIECE, TURNED OVER, AND IN A SECOND PASS, THE BOTTOM IS REMOVED. THE RIGID ONE-PIECE PRODUCTION DESIGN AND TWO-PART PRODUCTION OPERATION RESULTED IN COST SAVINGS OF 56%.

REDESIGNED METHOD



Drawing No.:

GLH-MCS-003-R01

Case No.:

GLH-MCS-003-R01

Case Description:

PRECISION DRILLED
MACHINE KEY

Drawn By:

BJH

Verified By:

GLH

Revision Notes:

REVISION NO. R01

NOT DRAWN TO SCALE

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