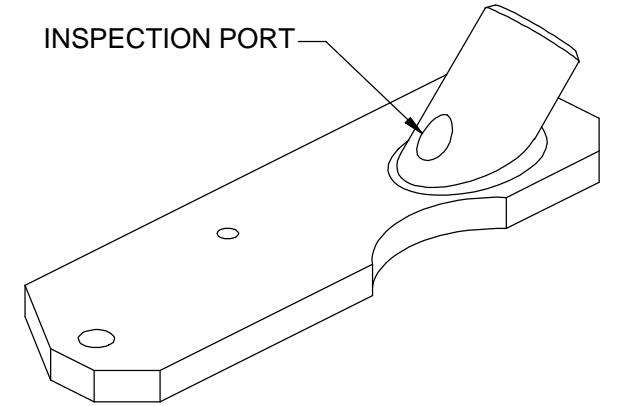
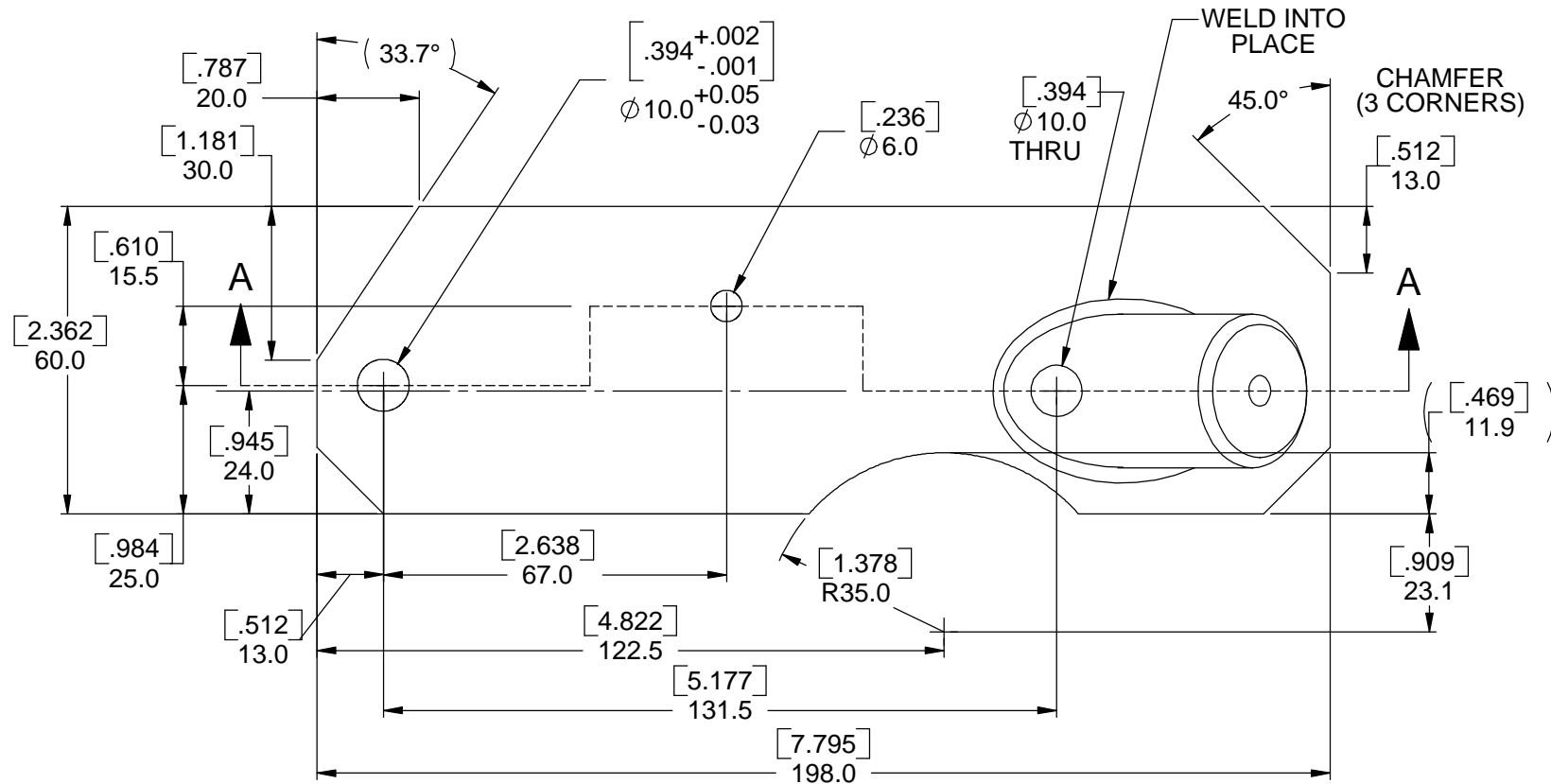


**PROPRIETARY NOTICE**

NOTICE IS HEREBY GIVEN THAT THIS DOCUMENT EMBODIES A CONFIDENTIAL PROPRIETARY DESIGN OR IS PART OF A CONFIDENTIAL PROPRIETARY DESIGN ORIGINATED BY OURSELVES OR ONE OF OUR CUSTOMERS, AND ALL DESIGN, MANUFACTURING, PREPRODUCTION USE AND SALE RIGHTS REGARDING THE SAME ARE EXPRESSLY RESERVED. IT IS SUBMITTED UNDER A CONFIDENTIAL RELATIONSHIP FOR A SPECIFIC PURPOSE, AND THE RECIPIENT BY ACCEPTING THIS DRAWING AGREES NOT TO SUPPLY OR DISCLOSE ANY INFORMATION REGARDING IT TO ANY UNAUTHORIZED PERSON, OR TO INCORPORATE IN OTHER PROJECTS, ANY SPECIAL FEATURES PECULIAR TO THIS DESIGN.

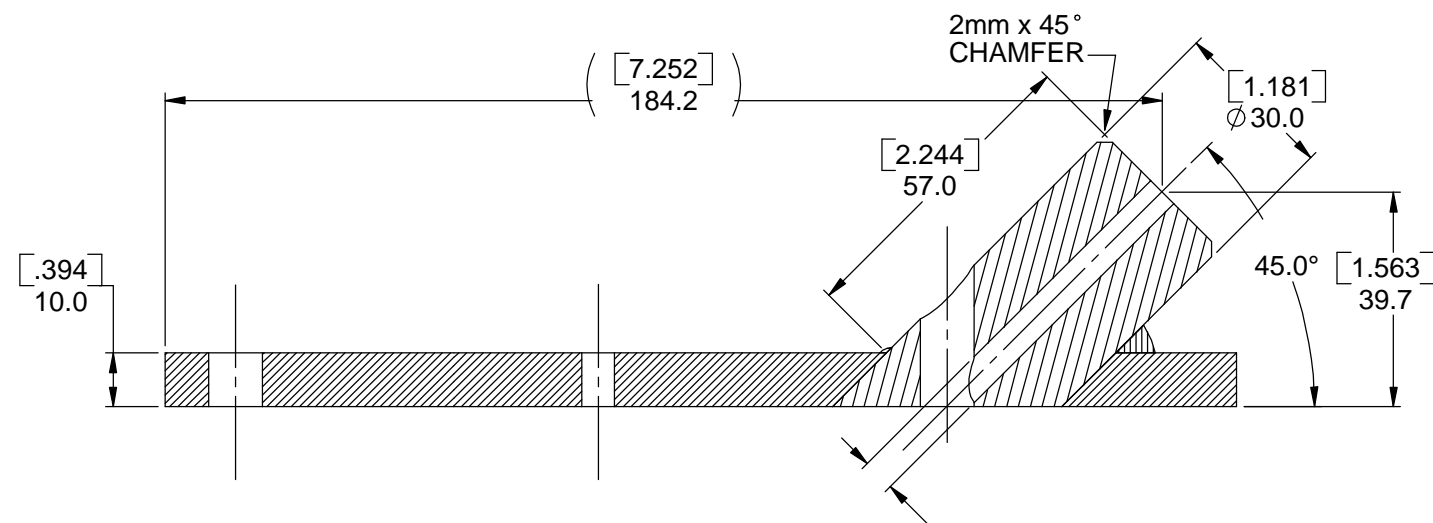
**REVISION HISTORY**

REV	LOC	DESCRIPTION	DATE	APPROVED



**NOTES:**

- 1) THIS DRAWING IS PROVIDED AS A COURTESY TO CITROEN OWNERS AND IS A DIRECT COPY OF AN ORIGINAL FACTORY DOCUMENT.
- 2) THIS TOOL IS INTENDED FOR USE ON CITROEN-MASERATI ENGINE BLOCKS WHICH HAVE NO OILING HOLE LOCATED AT THE BACK OF THE BLOCK - TO ALLOW DIRECT OILING TO THE MAIN CHAIN. THIS IS A FACTORY REQUIRED MODIFICATION. IF A HOLE EXISTS (COULD BE SMALLER THAN 1.0mm) DO NOT PERFORM THIS OPERATION.
- 3) DIMENSIONS IN INCHES ARE SHOWN IN [BRACKETS] AND ASSUME A TOLERANCE OF +/- .010"
- 4) YOU MAY CHOOSE TO CONSTRUCT THE TOOL WITH DIFFERENT MATERIALS AND TECHNIQUES THAN SHOWN (i.e. COULD MAKE TOOL FROM ALUMINIUM, AND USE A HARDENED DRILL BUSH) BASED ON MATERIALS AND TOOLING ON HAND.
- 5) NOTE THAT THERE ARE TWO PAGES FOR THIS SPECIFICATION.
- 6) IF YOU ARE NOT ABLE TO CONSTRUCT THIS TOOL, YOU MAY CONTACT DESIGN MASSIF AT THE ADDRESS BELOW FOR RENTAL OR PURCHASE.



SECTION A-A

**METRIC DRAWING**

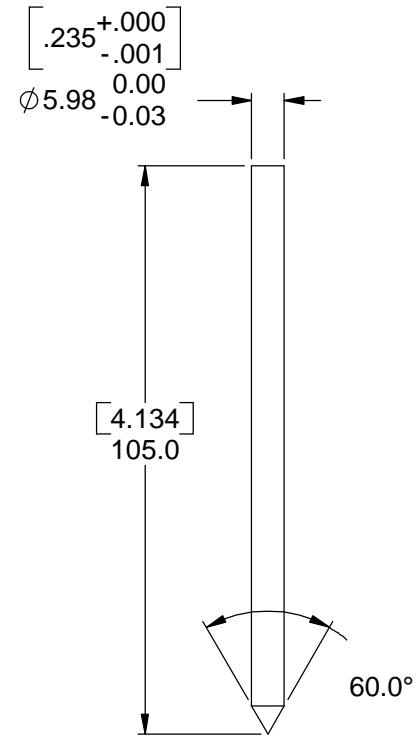
MATERIAL: MILD STEEL	FINISH: 0.80 um	HEAT TREAT: NONE	WEIGHT:
		<b>Manufacturing Solutions</b> <b>Product Design</b> <b>Prototypes</b>	
P.O. Box 800 - Mt. Aukum - CA 95656 (530) 620-6402 ph - (530) 620-6403 fax		massif@designmassif.com	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCES ARE:	APPROVALS	DATE	TITLE
FRACTIONS DECIMALS ANGLES	DRAWN <i>AWR</i>	Nov-2003	<b>Drill Jig,</b> <b>SM Crankcase</b>
.X = ± .25 ± 0° 30"	CHECKED		
	QUAL ENG		
CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE	DO NOT SCALE DRAWING	SCALE 3:4	DWG. <b>MR630-67</b> REV <b>A0</b> SHEET 1 OF 2

**PROPRIETARY NOTICE**

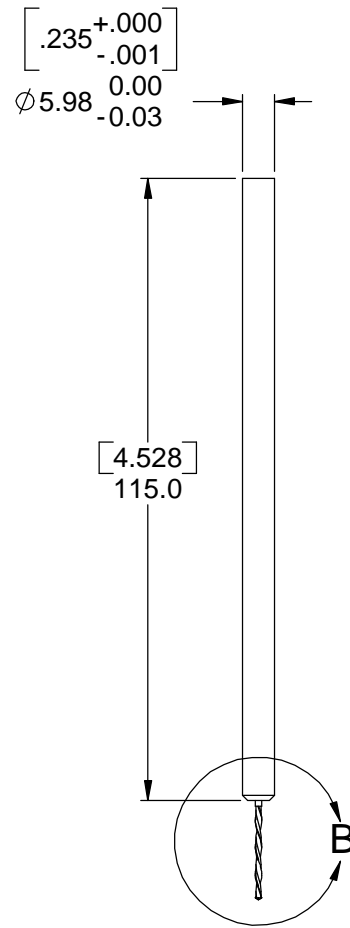
NOTICE IS HEREBY GIVEN THAT THIS DOCUMENT EMBODIES A CONFIDENTIAL PROPRIETARY DESIGN OR IS PART OF A CONFIDENTIAL PROPRIETARY DESIGN ORIGINATED BY OURSELVES OR ONE OF OUR CUSTOMERS, AND ALL DESIGN, MANUFACTURING, PREPRODUCTION USE AND SALE RIGHTS REGARDING THE SAME ARE EXPRESSLY RESERVED. IT IS SUBMITTED UNDER A CONFIDENTIAL RELATIONSHIP FOR A SPECIFIC PURPOSE, AND THE RECIPIENT BY ACCEPTING THIS DRAWING AGREES NOT TO SUPPLY OR DISCLOSE ANY INFORMATION REGARDING IT TO ANY UNAUTHORIZED PERSON, OR TO INCORPORATE IN OTHER PROJECTS, ANY SPECIAL FEATURES PECULIAR TO THIS DESIGN.

**REVISION HISTORY**

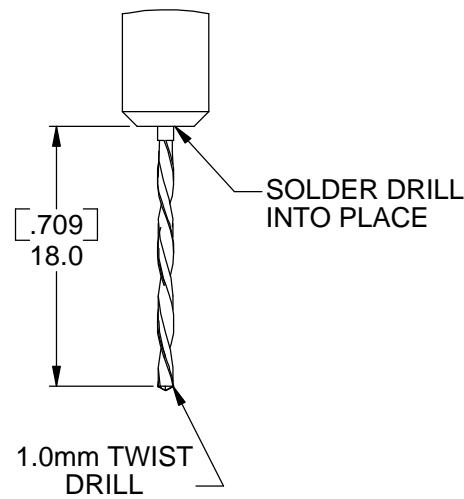
REV	LOC	DESCRIPTION	DATE	APPROVED



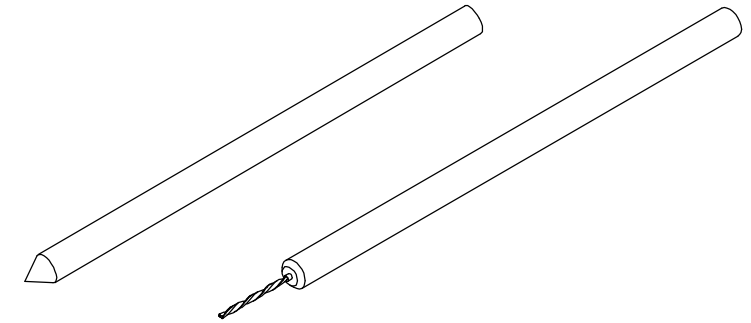
**PUNCH TOOL  
(HARDENED)**



**DRILL IN  
HOLDER**



**DETAIL B  
SCALE 2 : 1**



**NOTES:**

- 1) PLEASE REFER TO SHEET 1 FOR MAIN NOTES
- 2) USE PUNCH TOOL GENTLY TO ALLOW FOR A SUITABLE STARTING PLACE TO DRILL, AS WORKING AT SUCH A STEEP ANGLE CAN BE PROBLEMATIC.
- 3) THE SPEC'D DRILL SIZE IS VERY SMALL - TAKE GREAT CARE WHEN DRILLING, AS IT IS VERY EASY TO BREAK A DRILL BIT OF THIS SMALL SIZE. USE A HIGH SPEED DRILL, OR IT IS POSSIBLE TO DRILL THE HOLE BY HAND IN APPROX 10 MINUTES.
- 4) TOTAL DRILL DISTANCE TO BREAK THRU POINT INTO OIL GALLEY IS APPROX 7 to 9mm.
- 5) IF PERFORMING MODIFICATION TO A BUILT-UP ENGINE, CARE SHOULD BE TAKEN TO CONTAIN ANY SWARF/CHIPS CREATED BY THE DRILLING PROCESS. DRILL PART WAY, THEN GREASE THE DRILL BIT SO THAT SWARF WILL STICK TO IT. ANOTHER POSSIBILITY IS TO REMOVE THE INTER-SHAFT AND PLACE A SOME TISSUE INTO THE OIL GALLEY, THEN DRILL THE HOLE, THEN REMOVE THE TISSUE, EFFECTIVELY CLEANING THE OIL GALLEY.
- 6) USE SAFETY GLASSES!!!

**METRIC DRAWING**

MATERIAL: AS SHOWN	FINISH: 0.80 um	HEAT TREAT: NONE	WEIGHT:
		<b>Manufacturing Solutions Product Design Prototypes</b> P.O. Box 800 - Mt. Aukum - CA 95656 (530) 620-6402 ph - (530) 620-6403 fax massif@designmassif.com	
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.X = ± .25 ± 0°30"	CHECKED		
CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE	QUAL ENG		
DO NOT SCALE DRAWING	SCALE 3 : 4	DWG. <b>MR630-67</b>	REV <b>A0</b>
		SHEET 2 OF 2	