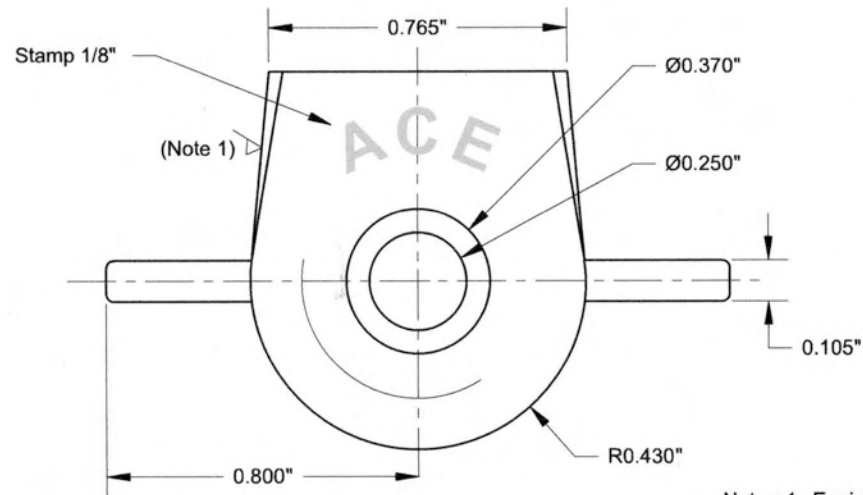
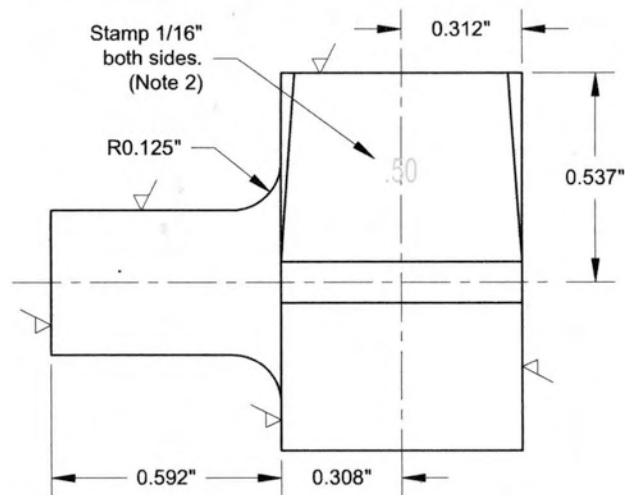
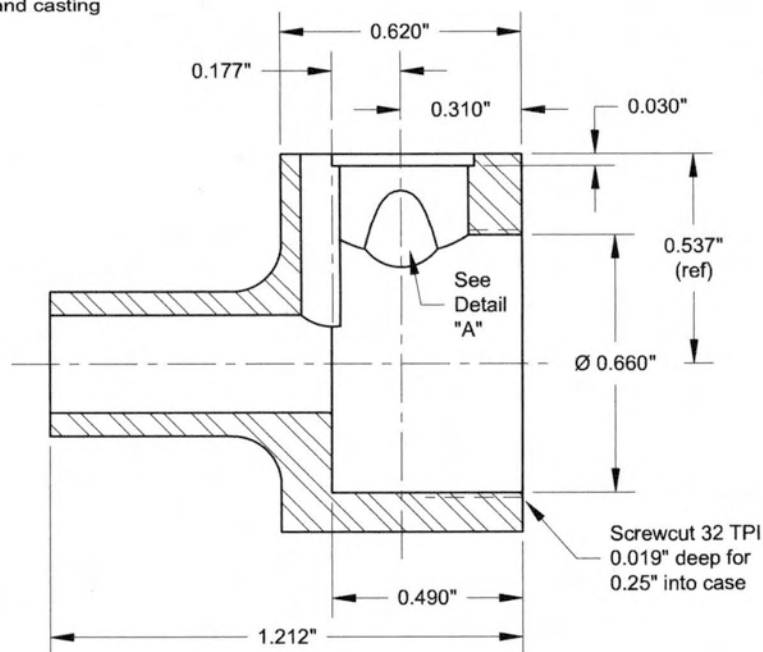
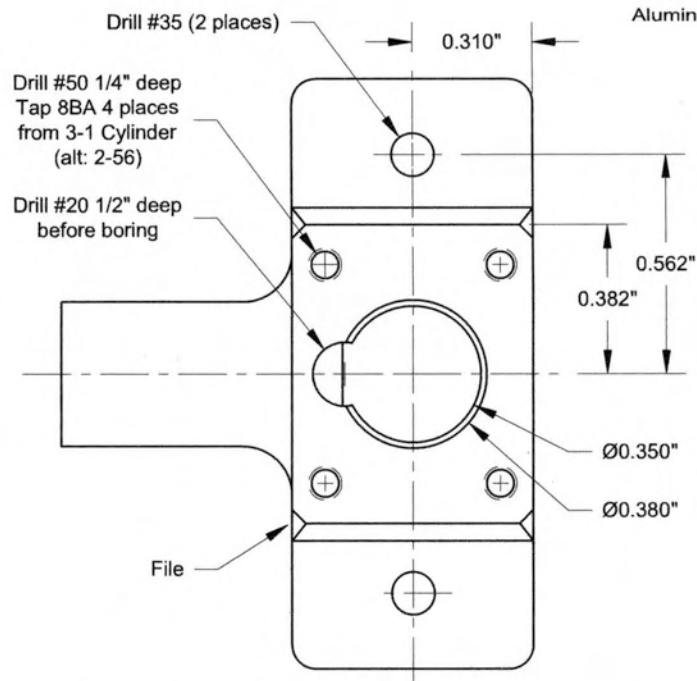


**Detail "A"**

Relief for conrod swing  
(file or mill approx 14°)

**-1 Crankcase**  
Aluminum sand casting

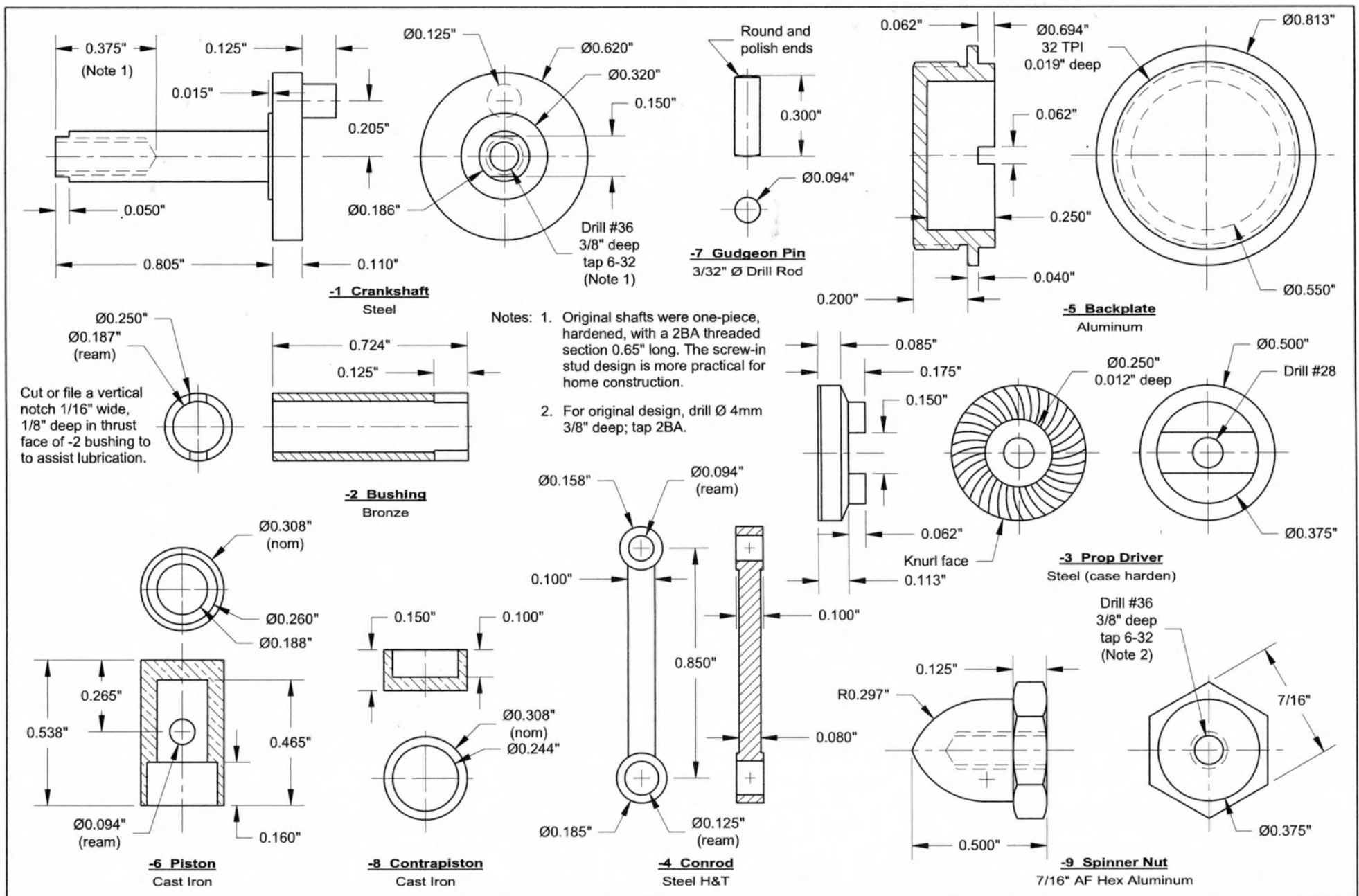


Notes: 1. Engine mounting lugs and underside of crankcase were left as-cast. The remainder of the case was machined or filed. The slope of the case sides is approximately 5°.

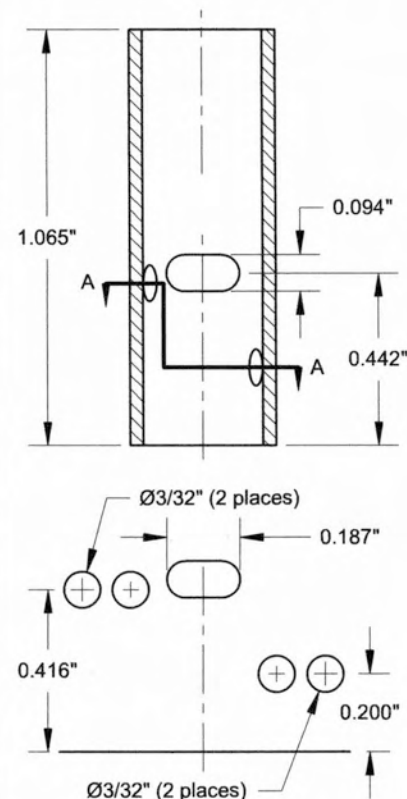
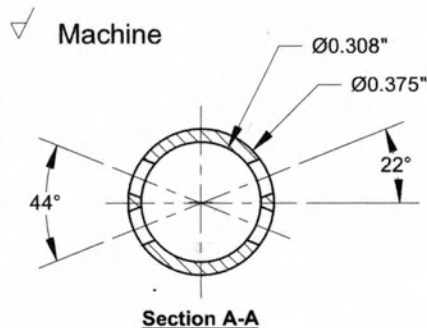
2. A serial number was stamped under the ".50" on the right side only.

✓ Machine

|            |                                            |      |       |                 |                                                                                       |                                                                                                                            |                            |
|------------|--------------------------------------------|------|-------|-----------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------|
|            |                                            |      | MAT'L | As Noted        | DO NOT SCALE DRAWING                                                                  |  <b>MOTOR BOYS</b><br>(INTERNATIONAL) | NAME<br><b>ACE</b>         |
| 2009-02-28 | Add UNC alternate threads                  | BMBI | SCALE | <b>2 X SIZE</b> | WORK TO DIMENSIONS<br>ALL DIMENSIONS<br>ARE IN INCHES                                 |                                                                                                                            |                            |
| 2009-01-11 | Add 2-2 thread depth; fix stamping details | BMBI | DRAWN | EMB             |  |                                                                                                                            | NUMBER                     |
| DATE       | CHANGE                                     | BY   | CAD   | BMBI 2007-10-16 |                                                                                       |                                                                                                                            | <b>Sheet 1 - Crankcase</b> |

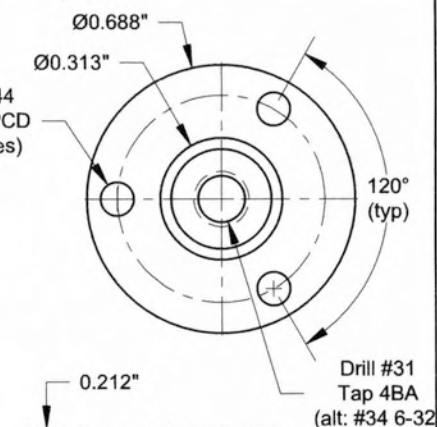
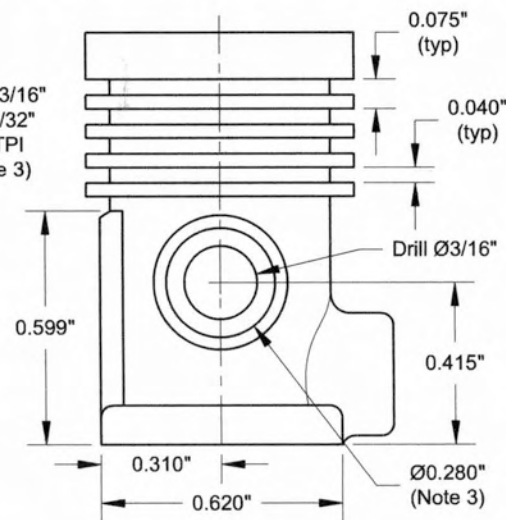
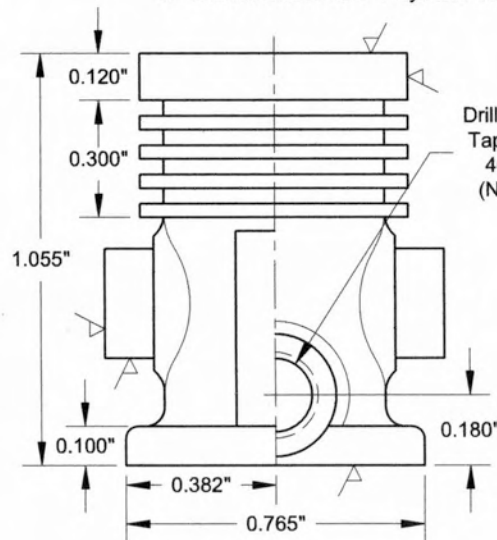


|            |                                         |      |       |                 |                                                                                                                                                                             |                                                                                                                            |                              |
|------------|-----------------------------------------|------|-------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------|
|            |                                         |      | MAT'L | As Noted        | DO NOT SCALE DRAWING                                                                                                                                                        |  <b>MOTOR BOYS</b><br>(INTERNATIONAL) | NAME<br><b>ACE</b>           |
| 2009-02-23 | Shaft stud data revised.                | BMBI | SCALE | <b>2 X SIZE</b> | WORK TO DIMENSIONS<br>ALL DIMENSIONS ARE IN INCHES                                                                                                                          |                                                                                                                            |                              |
| 2009-01-11 | Note regarding shaft lubrication added. | BMBI | DRAWN | EMB             |   |                                                                                                                            | NUMBER                       |
| DATE       | CHANGE                                  | BY   | CAD   | BMBI 2007-10-16 |                                                                                                                                                                             |                                                                                                                            | <b>Sheet 2 - Moving Bits</b> |

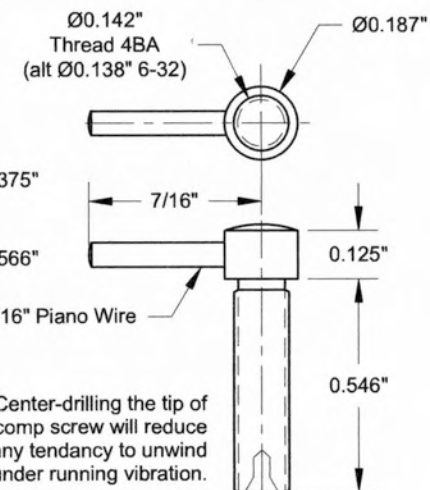


**-2 Cylinder Liner**  
Steel (note 4)

- Notes:
1. Spot from -3 Cylinder Head. The radial position of the holes was somewhat arbitrary on original engines.
  2. Originals used Aluminium for compression screw with a steel Tommy bar. All steel construction is recommended for a longer, trouble-free life.
  3. As-cast diameter of stub approx 11/32"
  4. -2 Liner shrunk into -1 Cylinder aligning at top.

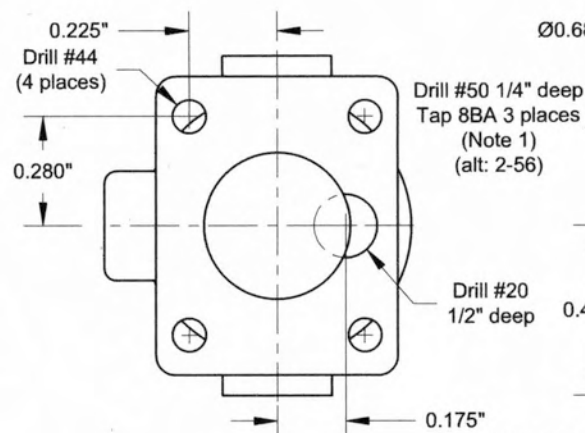


**-3 Cylinder Head**  
Aluminum



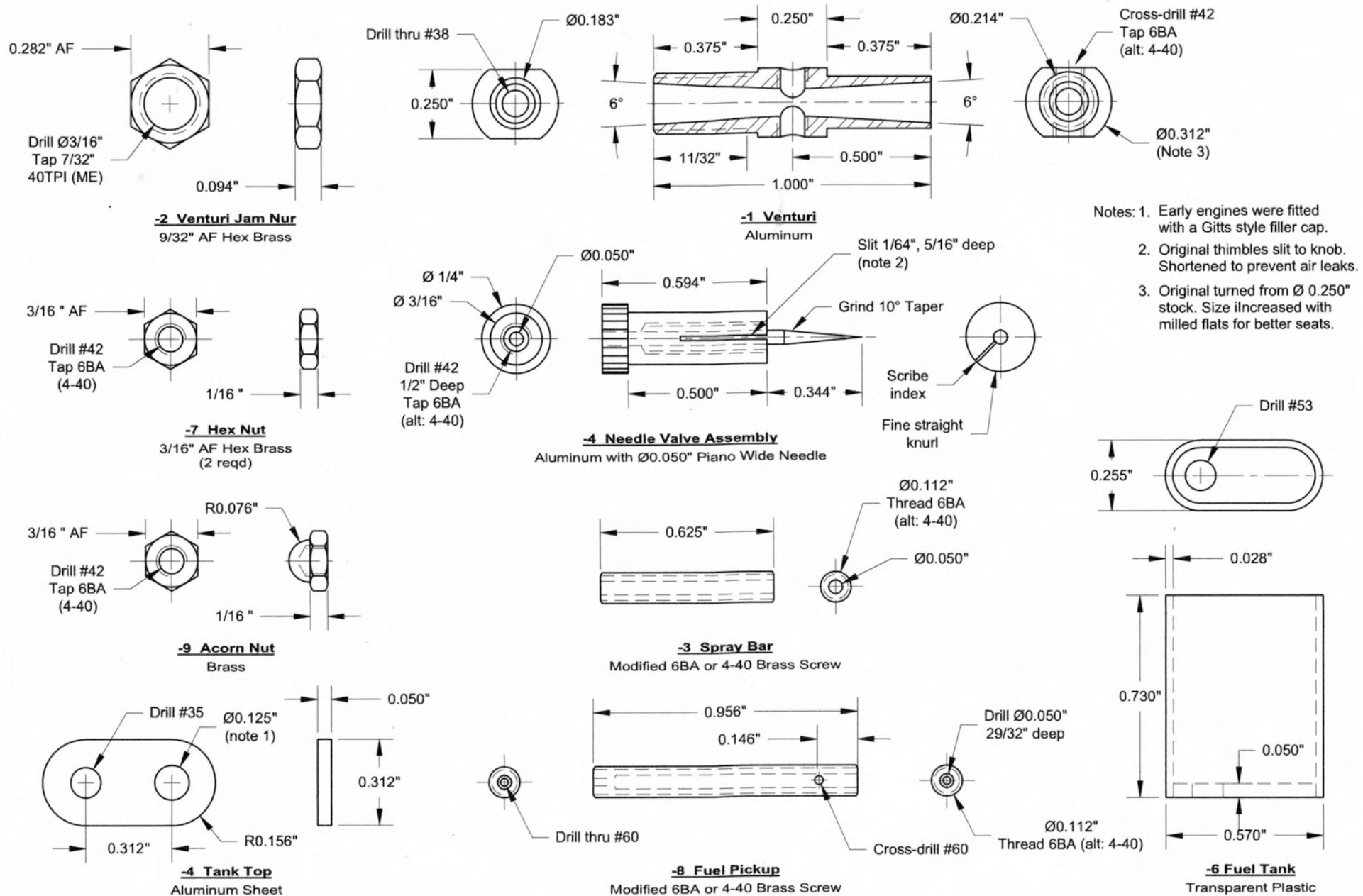
Center-drilling the tip of the comp screw will reduce any tendency to unwind under running vibration.

**-4 Compression Screw**  
Steel (note 2)

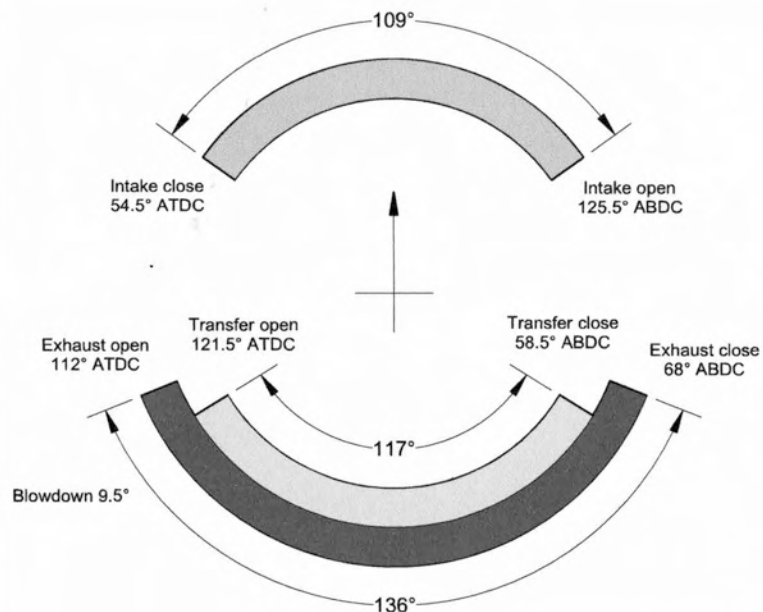


**-1 Cylinder**  
Aluminum sand casting

|            |                            |      |       |                 |                                                       |                                      |                                     |
|------------|----------------------------|------|-------|-----------------|-------------------------------------------------------|--------------------------------------|-------------------------------------|
|            |                            |      | MAT'L | As Noted        | DO NOT SCALE DRAWING                                  | <b>MOTOR BOYS</b><br>(INTERNATIONAL) | NAME<br><b>ACE</b>                  |
| 2009-02-28 | Add UNC altrenate threads  | BMBI | SCALE | <b>2 X SIZE</b> | WORK TO DIMENSIONS<br>ALL DIMENSIONS<br>ARE IN INCHES |                                      |                                     |
| 2009-01-11 | Add head bolts PCD detail. | BMBI | DRAWN | EMB             |                                                       |                                      |                                     |
| DATE       | CHANGE                     | BY   | CAD   | BMBI 2007-10-16 |                                                       |                                      | NUMBER<br><b>Sheet 3 - Cylinder</b> |



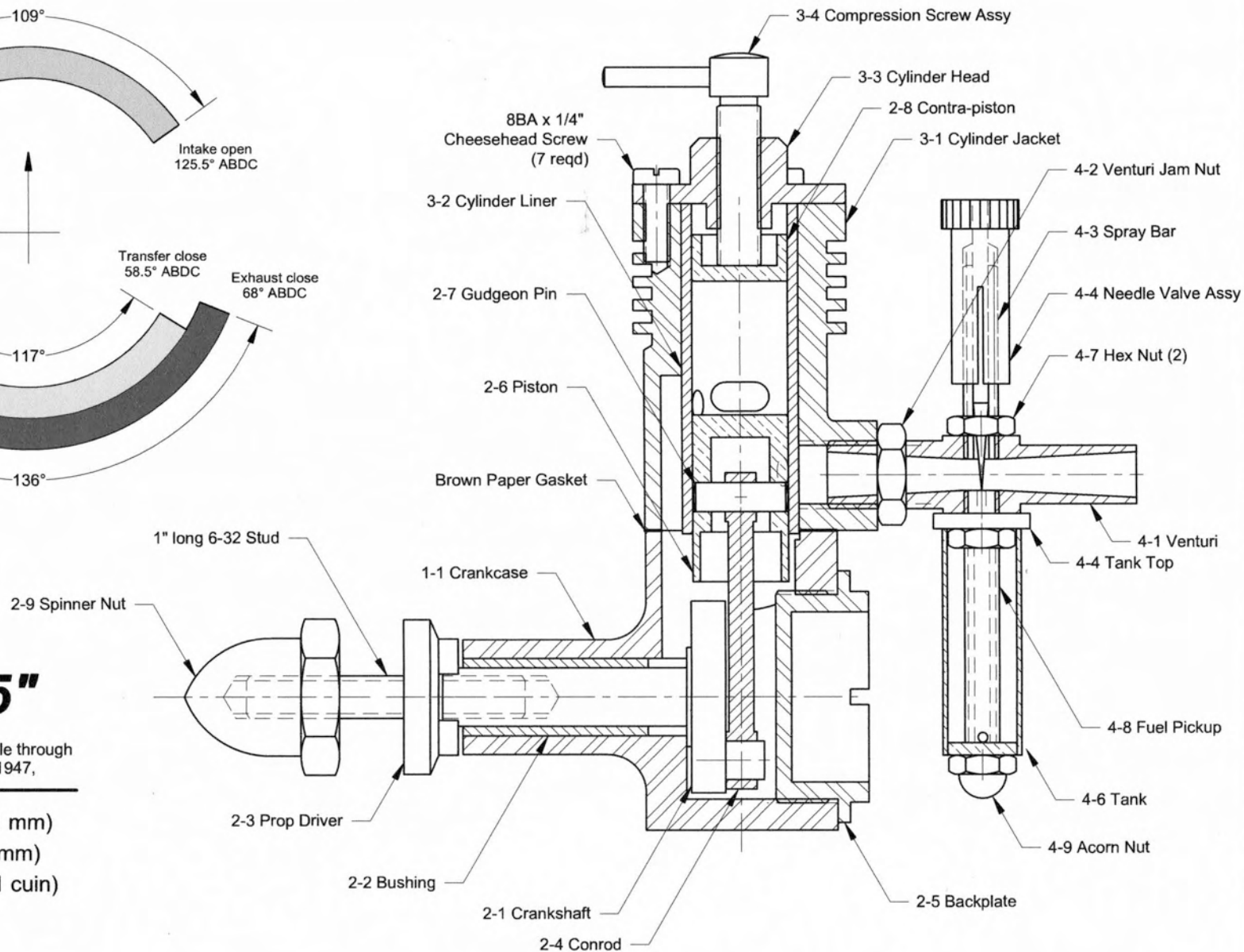
|            |                                        |      |       |                 |                                                                                                                                                                             |                                                                                                                            |                              |
|------------|----------------------------------------|------|-------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------|
|            |                                        |      | MAT'L | As Noted        | DO NOT SCALE DRAWING                                                                                                                                                        |  <b>MOTOR BOYS</b><br>(INTERNATIONAL) | NAME<br><b>MAS ACE .5cc</b>  |
| 2009-02-28 | Add UNC altrenate threads              | BMBI | SCALE | <b>2 X SIZE</b> | WORK TO DIMENSIONS<br>ALL DIMENSIONS<br>ARE IN INCHES                                                                                                                       |                                                                                                                            |                              |
| 2009-01-11 | Revise venturi and thimble (notes 2&3) | BMBI | DRAWN | EMB             |   |                                                                                                                            | NUMBER                       |
| DATE       | CHANGE                                 | BY   | CAD   | BMBI 2008-12-24 |                                                                                                                                                                             |                                                                                                                            | <b>Sheet 4 - Fuel Susyem</b> |

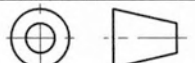


## "ACE 0.5"

Commissioned by Harry York for sale through  
Model Aircraft Supplies, circa 1947,

Stroke: 0.410" (10.41 mm)  
Bore: 0.308" (7.82 mm)  
Capacity: 0.501cc (0.31 cuin)



|      |        |    |       |                 |                                                                                       |                                                                                                                            |                                      |
|------|--------|----|-------|-----------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
|      |        |    | MAT'L | As Noted        | DO NOT SCALE DRAWING<br>WORK TO DIMENSIONS<br>ALL DIMENSIONS<br>ARE IN INCHES         |  <b>MOTOR BOYS</b><br>(INTERNATIONAL) | NAME<br><b>MAS ACE .5cc</b>          |
|      |        |    | SCALE | <b>2 X SIZE</b> |                                                                                       |                                                                                                                            | NUMBER                               |
|      |        |    | DRAWN | EMB             |  |                                                                                                                            | <b>Sheet 5 - General Arrangement</b> |
| DATE | CHANGE | BY | CAD   | BMBI 2007-10-16 |                                                                                       |                                                                                                                            |                                      |