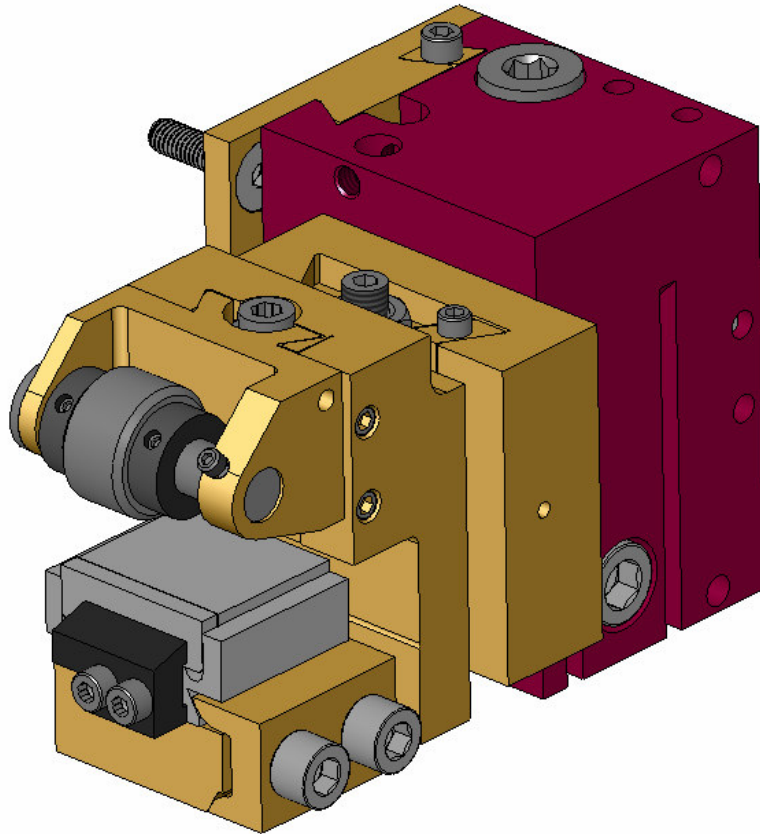


Shave Tool Adjustment Manual



**Become familiar with the adjustments
of your Shave Tool**

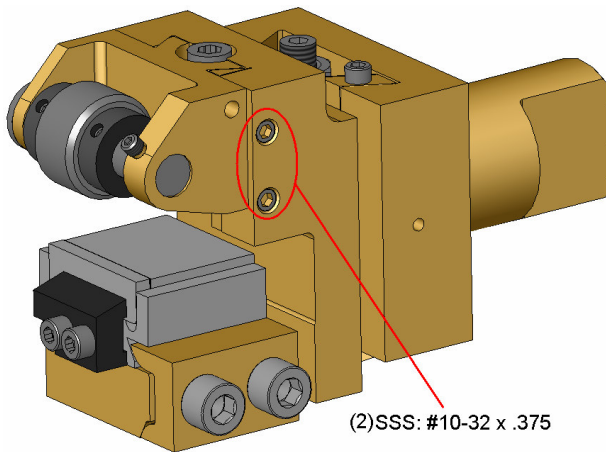
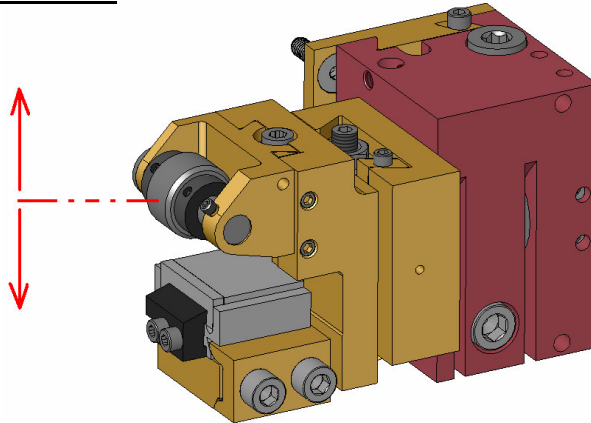
Congratulations and thank your for purchasing your new 111 Shave Tool. To fully insure that you understand the operation and gain full advantage of this tool’s benefits, this instruction manual will guide you through the simple, few steps in learning the different adjustments available. Those being Roll, Taper, and Lift adjustment. Although this manual uses a 111-15 for example, this manual also applies to the items found in the Applications section.

Index

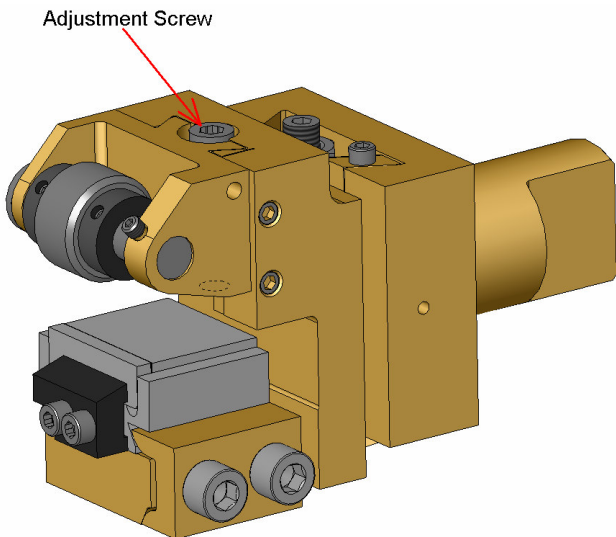
| | Page(s) |
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A. Adjustments

I. Roll Adjustment



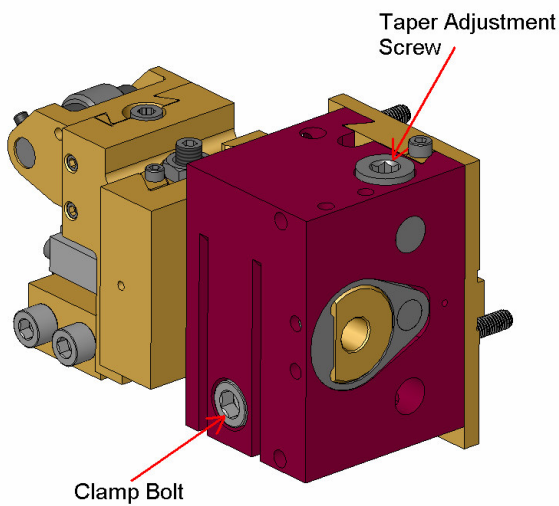
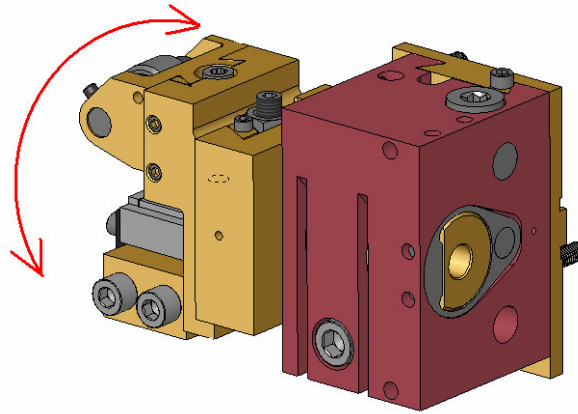
1. Loosen both #10-32 set screws (Item #12 in Appendix I).
Note: Never tighten set screws without roll holder in place. Possible damage can occur to head.



2. Turn adjusting screw (Item #9 in Appendix I) clockwise or counterclockwise until desired size is achieved. This distance between the OD of the roll and the shave tool will be the OD of the part. This can be done with Vernier Callipers or a gage. It is easiest to set this height while the Shave Tool Assembly is out of the machine. *Each turn of the adjustment screw is approx .035" (.889mm).*
3. Retighten both set screws to lock setting in place.

II. Taper Adjustment

This adjustment will help to eliminate any taper you may have in your part.



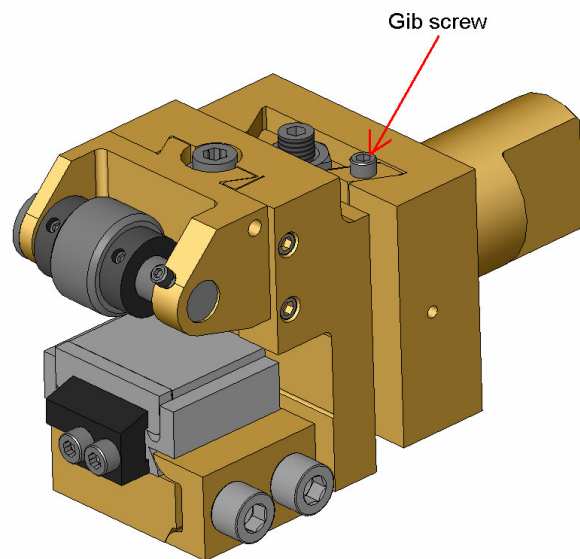
1. To adjust the taper, start by loosening the clamp bolt (item #14 in Appendix II). Use an allen wrench to turn the Taper Adjustment Screw (item #4 in Appendix II) clockwise or counterclockwise until the desired position is achieved.

- Each click in turn of the Taper Adjustment Screw equals .00015" (.00381mm) in diametral taper per inch of part length.

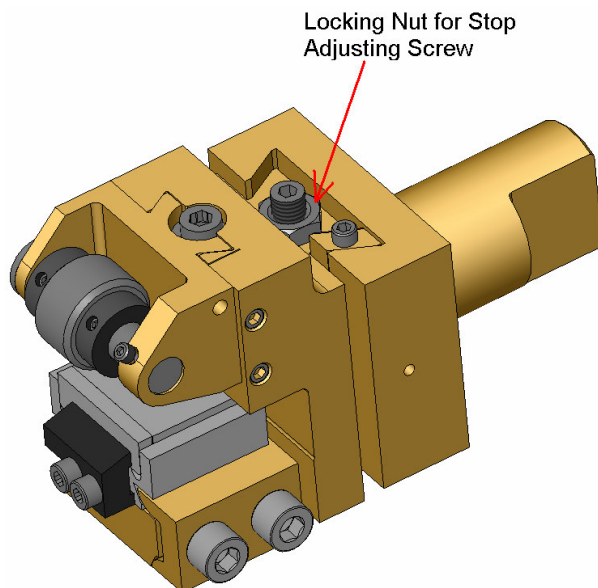
Once the desired setting is achieved, re-tighten the Clamp Bolt to lock the setting in place.

III. Lift Adjustment

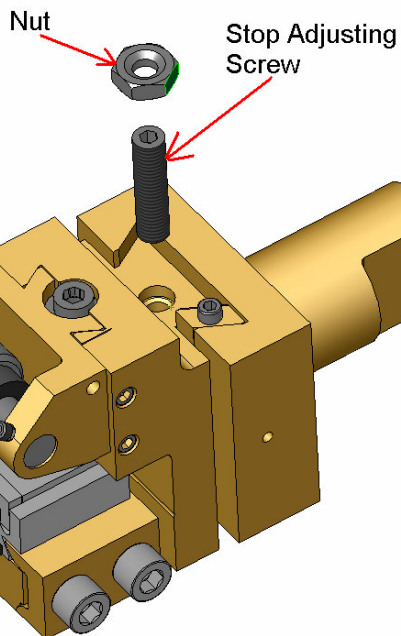
This adjustment is used to increase or decrease the amount of lift of the head.



1. Gib Assembly (item# 11 in Appendix 1) does not need to be loosened to adjust the head. The gib should be tight enough to allow movement of the head up and down with the action of the internal spring (item# 1 in Appendix 1).



2. Loosen the locking nut to free the Stop Adjusting Screw (Item #3 in Appendix 1).



3. Turn the Stop Adjusting Screw clockwise or counterclockwise until the desired lift height is achieved.
4. Re-tighten the locking nut to secure the lift height.

B. Applications

The following items are subject to the instructions outlined in this manual.

a. Shave Tool Assembly

1. 111-01

b. Tool Block Assemblies

- | | |
|---------------|--|
| 1. 111-10 | - 1 st Position |
| 2. 111-10-QCT | - 1 st Position, Quick Change Tooling |
| 3. 111-11 | - 2 nd Position |
| 4. 111-11-QCT | - 2 nd Position, Quick Change Tooling |
| 5. 111-11-DAV | - 2 nd Position, Davenport Slide |
| 6. 111-12 | - 3 rd Position |

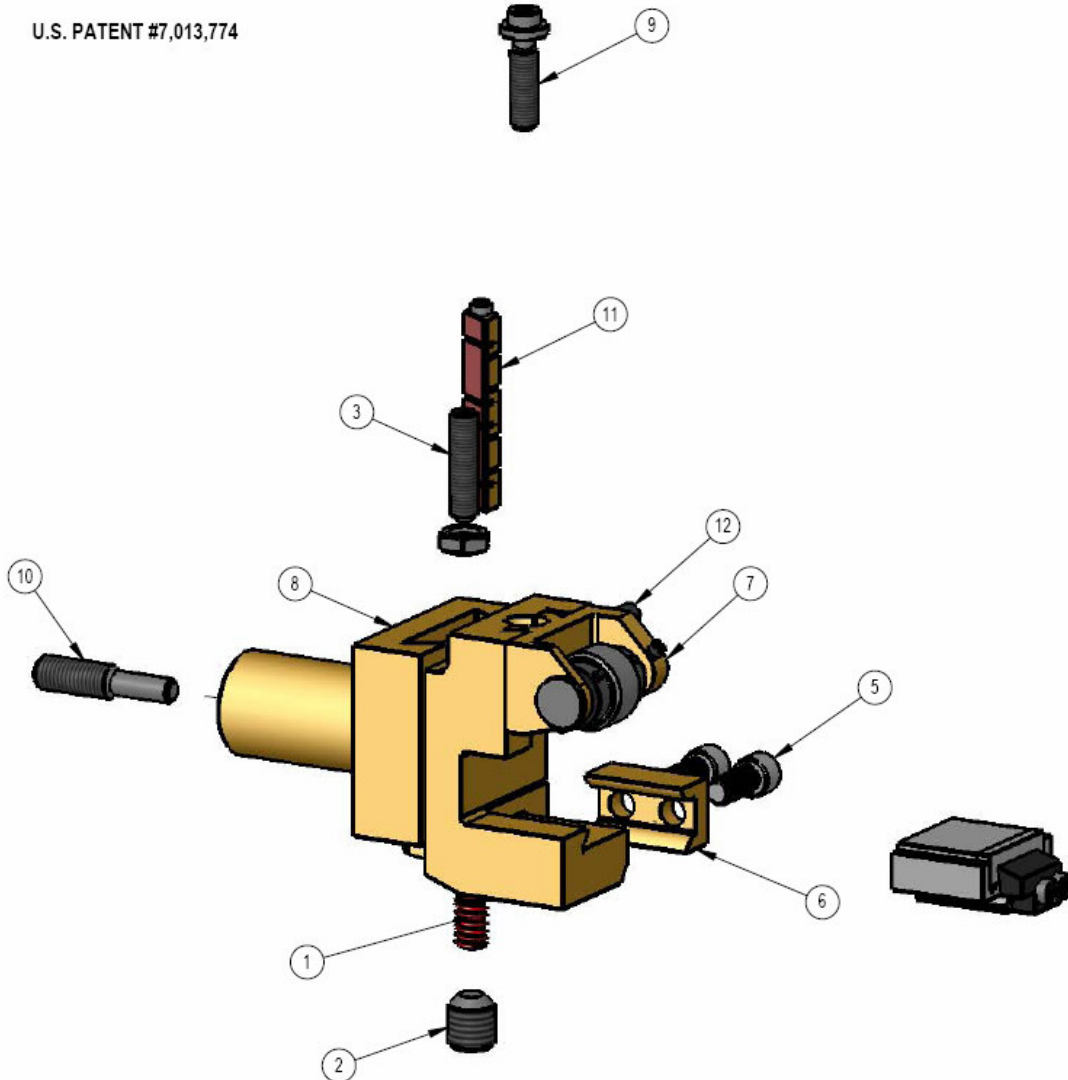
c. Shave Tool Assemblies with Block Assembly

- | | |
|---------------|--|
| 1. 111-13 | - 1 st Position |
| 2. 111-13-QCT | - 1 st Position, Quick Change Tooling |
| 3. 111-14 | - 2 nd Position |
| 4. 111-14-DAV | - 2 nd Position, Davenport Slide |
| 5. 111-14-QCT | - 2 nd Position, Quick Change Tooling |
| 6. 111-15 | - 3 rd Position |
| 7. 111-16-CJW | - 4 th Position |
| 8. 111-16-DAV | - 3 rd /4 th Position |
| 9. 111-17 | - 2 nd /3 rd Position |
| 10. 111-18 | - 1 st /2 nd /3 rd Position |

C. Appendix

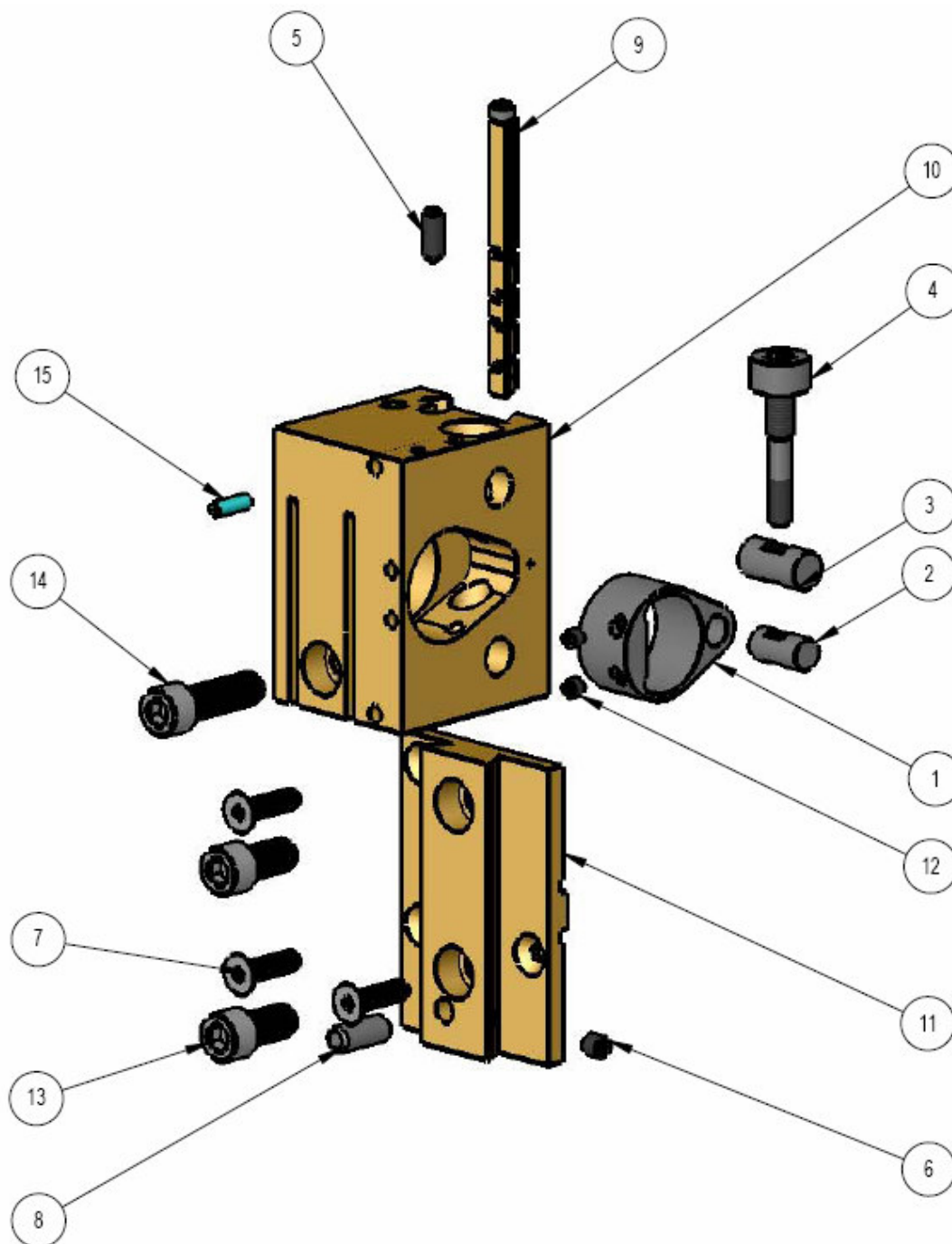
I. 111-01 - Center Shave Tool Assembly

U.S. PATENT #7,013,774



| ITEM NO. | PART NUMBER | Description | QTY. |
|----------|-------------------|---|------|
| 1 | 108011 | Spring: Compression, .300 OD x 1.00 | 1 |
| 2 | 108017 | Screw: SSS, 7/16-20 x .500 | 1 |
| 3 | 108018 | Stop Adjusting Screw | 1 |
| 4 | 108019 | Nut: Jam, 1/4-20 | 1 |
| 5 | 108023 | Screw: SHCS, 1/4-28 x .625 | 2 |
| 6 | 108046 | Dovetail Clamp - 1/2" & 5/8" Reversible | 1 |
| 7 | 111-20 | Center Roll Bracket Assembly | 1 |
| 8 | 111000 | Matched Assembly | 1 |
| 9 | 111004 | Adjusting Screw | 1 |
| 10 | 111014 | Body Pin | 1 |
| 11 | 111058 | Running Expansion Gib Assembly | 1 |
| 12 | 162008 | Screw: SSS, #10-32 x .375 Half Dog Pt. | 2 |
| 13 | Shave Tool Insert | | 1 |

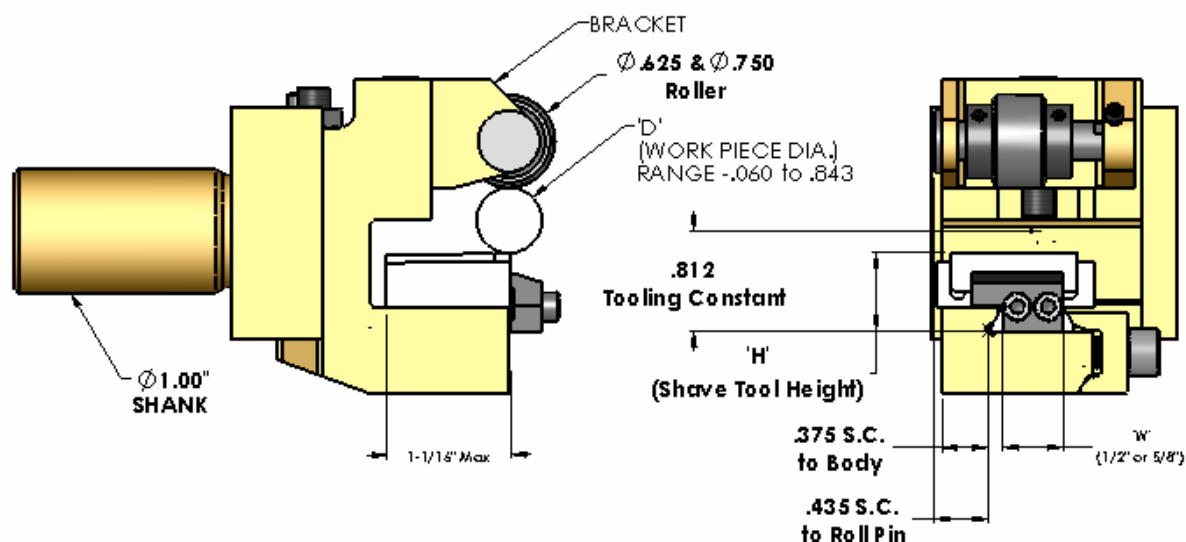
II. 111-12 - 3rd Position Tool Block Assembly



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 1 | 111007 | Taper Arm - 3rd Position | 1 |
| 2 | 111008 | Taper Pin (Arm) | 1 |
| 3 | 111009 | Taper Pin (Body) | 1 |
| 4 | 111010 | Taper Adjustment Screw | 1 |
| 5 | 111023 | Screw: SSS, #10-32 x .500 Cup Pt. | 1 |
| 6 | 111024 | Screw: SSS, #8-32 x .250 Flat Pt. | 1 |
| 7 | 111026 | Screw: FHCS, #10-32 x .750 | 3 |
| 8 | 111028 | Pin: Dowel, 1/4 x .625 | 1 |
| 9 | 111059 | Locking Gib - 1st & 3rd Position | 1 |
| 10 | 111201 | Tool Block | 1 |
| 11 | 111202 | Dovetail Adapter Plate (3rd) | 1 |
| 12 | 125043 | Screw: SSS, #8-32 x .188 Cup Pt. | 2 |
| 13 | 130046 | Screw: SHCS, 5/16-24 x .625 | 2 |
| 14 | 130047 | Screw: SHCS, 5/16-24 x 1.000 | 1 |
| 15 | NC41029 | Spring Plunger #8-32 Short, Heavy Force | 1 |

III. 111 Shave Tool Holder Capacity Chart

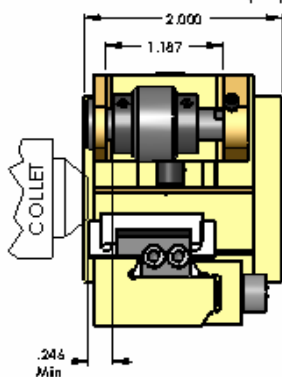
111 SHAVE TOOL HOLDER CAPACITY CHART



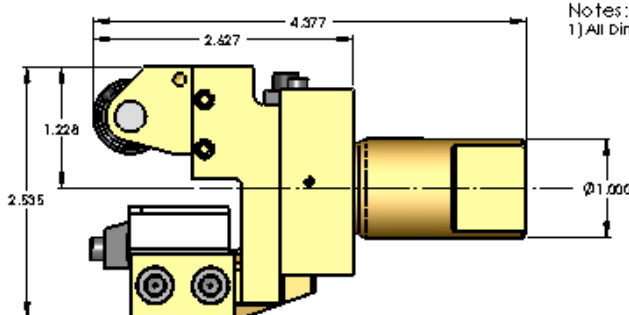
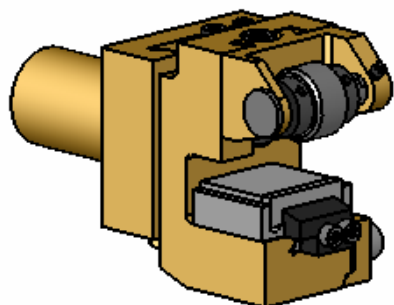
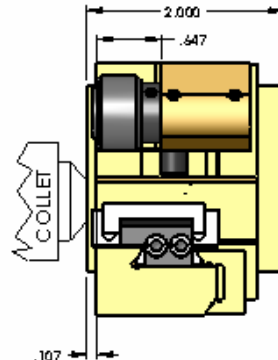
Recommended 'H':
 $H = .812 - (D/2)$
 H = SHAVE TOOL HEIGHT
 D = WORKPIECE DIA.

BRACKET STYLE:

CENTER SHAVE TOOL ('C') - 111120



INBOARD SHAVE TOOL ('I') - 111121



Notes:
 1) All Dimensions are reference only.

U.S. PATENT #7,013,774