

Job Safety Analysis Worksheet

Job: Machine a rotor on a bench lathe

Analysis By: Mr. Payne	Reviewed By: Mr. Payne	Approved By: Mr. Payne
Date: September 26, 2012	Date: September 26, 2012	Date: September 26, 2012
Sequence of Steps	Potential Accidents or Hazards	Preventive Measures
Note: The rotor has been previously removed from the vehicle as per the service manual procedure specific to the vehicle.	Note only	Note only
1. Visually and physically determine if the rotor can be machined. (Inspect and measure with a brake micrometer)	<ul style="list-style-type: none"> • The rotor may fall from a workbench and injure your feet or legs 	<ul style="list-style-type: none"> • Handle the rotor with care • Wear protective footwear
2. Using sandpaper or a wire brush, clean both sides of the rotor to machine mounting surface)	<ul style="list-style-type: none"> • The rotor may fall from a workbench and injure your feet or legs • Inhaling the dust may cause illness 	<ul style="list-style-type: none"> • Handle the rotor with care • Wear protective footwear • Wear a dust mask
3. Gather the tooling for the machine. Tooling list for slip on type rotor: <ul style="list-style-type: none"> • A hub centering cone that fits the center of the rotor to be machined. • Hub centering spring • Two support adapters that fit the rotor flange in the largest area possible without contacting the sides of the hat area. • Silencer/ spacer (A second spacer if needed) • Reverse thread locking nut • Silencer band (or spring) 	<ul style="list-style-type: none"> • May drop tooling on feet or legs • Hub centering spring may fall and bounce into eyes or body 	<ul style="list-style-type: none"> • Handle the tooling with care • Wear protective footwear • Eye protection should always be worn in the shop (shop policy)

<p>Tooling list for bearing hub type rotor:</p> <ul style="list-style-type: none"> • Two double tapered rotor adapter cones that fit the bearing races of the rotor to be machined. • Silencer/ spacer (A second spacer if needed) • Reverse thread locking nut • Silencer band (or spring) 		
<p>4. Prepare the twin cutting head for rotor installation. Loosen the twin cutter assembly to machine retaining nut; (just enough to make the assembly movable).</p>	<ul style="list-style-type: none"> • Shavings from machine may get under skin and nails 	<ul style="list-style-type: none"> • Clean off the machine before and after use. • Wear gloves for added protection.
<p>Install the tooling and rotor to the machine arbor as follows:</p>	<p>Note only</p>	<p>Note only</p>
<p>5. Center the rotor between the cutting knives and tighten the rotor to the arbor</p>	<ul style="list-style-type: none"> • Wrench could slip • May drop rotor and tooling on feet and legs • Could pinch fingers and hands between the rotor an machine 	<ul style="list-style-type: none"> • Never push a wrench • Handle the rotor and tooling with care • Wear protective footwear • Beware of pinch points
<p>6. Re-center the rotor between the cutting knives and re-tighten the twin cutter assembly to machine retaining nut.</p>	<ul style="list-style-type: none"> • If nut is loosened too much, the head could fall off and hit feet and legs. 	<ul style="list-style-type: none"> • Only loosen the nut until the assembly moves. • Wear protective footwear
<p>7. Verify that the cutting knives are not contacting the rotor.</p>	<ul style="list-style-type: none"> • Shavings may become air-born during close inspection of the knives and potentially get into eyes 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy)
<p>8. Manually crank the rotor feed drive clockwise until the knives are located near</p>	<ul style="list-style-type: none"> • Body parts may get pinched between the rotor and knives 	<ul style="list-style-type: none"> • Beware of pinch points

the center of the rotor.		
9. Turn the power on to start the motor	<ul style="list-style-type: none"> • Body parts and loose articles may get pulled into the machine • Shock hazard 	<ul style="list-style-type: none"> • Verify that no foreign articles, clothing, and/or human body parts are touching the machine. • Inspect power cords for disrepair before use. • Do not stand in water
10. Turn either knife adjustment (cylindrical micrometer) dial clockwise until a very faint scratching noise is audible.	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body • Parts are touching the machine.
11. Lock the knife in place by turning the associated red locking knob clockwise until slightly snug.	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body parts are touching the machine.
12. Repeat the previous two steps on the other knife.	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body parts are touching the machine.
13. Zero the micrometers on the knife adjustment dials.	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles,

		clothing, and/or human body parts are touching the machine.
14. Using the rotor feed dial, slowly move the twin cutter assembly inward until it reaches the innermost possible position.	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Do not let the left knife blade contact the rotor hat assembly. • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body parts are touching the machine.
15. Make cutter adjustments one knife at a time. Turn the dials on the micrometers clockwise two notches (.004) and tighten the locking screw.	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body parts are touching the machine.
16. Repeat the cutter adjustment on the opposite cutter as described in the previous step.	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body parts are touching the machine.
DO NOT ENGAGE ANY OF THE CONTROLS ON THE RIGHT SIDE OF THE MACHINE. DAMAGE TO THE MACHINE AND THE ROTOR WILL RESULT!	Note only	Note only
17. Engage the rotor feed transmission control (left side of the machine)	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body

		parts are touching the machine.
18. Repeat steps 14 thru 18 until a uniform surface finish is observed on both sides of the rotor.	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body parts are touching the machine.
19. Power down the machine (switch off).	<ul style="list-style-type: none"> • Chips will be air-born potential eye hazard • Body parts and loose articles may get pulled into the machine • Shock hazard 	<ul style="list-style-type: none"> • Eye protection should always be worn in the shop (shop policy) • Verify that no foreign articles, clothing, and/or human body parts are touching the machine. • Inspect power cords for disrepair before use. • Do not stand in water
20. Remove the silencer band (or spring).	<ul style="list-style-type: none"> • Spring or silencer may slap/snap, potential lacerations/ contusions/ eye injury 	<ul style="list-style-type: none"> • Remove silencer slowly and cautiously
21. Turn the reverse thread lock nut clockwise to remove it and the outer adapters.	<ul style="list-style-type: none"> • Wrench could slip • May drop rotor and tooling on feet and legs • Could pinch fingers and hands between the rotor an machine • Shavings from machine may get under skin and nails 	<ul style="list-style-type: none"> • Never push a wrench • Handle the rotor and tooling with care • Wear protective footwear • Beware of pinch points • Clean off the machine before and after use. • Wear gloves for added protection.

22. Remove the rotor from the machine.	<ul style="list-style-type: none"> • May drop rotor and tooling on feet and legs • Could pinch fingers and hands between the rotor an machine • Shavings from machine may get under skin and nails 	<ul style="list-style-type: none"> • Handle the rotor and tooling with care • Wear protective footwear • Beware of pinch points • Clean off the machine before and after use. • Wear gloves for added protection.
23. Measure and record the thickness of the rotor.	<ul style="list-style-type: none"> • The rotor may fall from a workbench and injure your feet or legs 	<ul style="list-style-type: none"> • Handle the rotor with care • Wear protective footwear
Determine if the machine is usable or unusable. Discard and replace with new, if less than the specification.	Note only	Note only