**Brake Service Training Process and Procedures**

**Step Detail Can Be Found In The DTOG**

**Step 1 Trainer Does/Trainer Explains**

**Prepare for Service**

|  |  |
| --- | --- |
| **Trainer**  | **Trainee** |
| Wears required PPE (Safety Glasses, Nitrile Gloves, Oil/Slip Resistant Shoes)  | Wears required PPE (Safety Glasses, Nitrile Gloves, Oil /Slip Resistant Shoes) |
| Prepares Tools  | Trainee observes and listens |
| Identifies vehicle information  | Trainee observes and listens |
| Determines whether brakes are disc or drum systems | Trainee observes and listens |
| Identify vehicle manufacturer’s wear limits | Trainee observes and listens |

**Test Drive Vehicle**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Test brakes | Trainee observes and listens |
| Drive vehicle into designated bay | Trainee observes and listens |

**Inspect Brake Fluid and Master Cylinder**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Raise hood and install fender covers | Trainee observes and listens |
| Check brake fluid level and record level | Trainee observes and listens |
| Test brake fluid | Trainee observes and listens |
| Inspect master cylinder | Trainee observes and listens |

**Prepare Vehicle for Brake Inspection**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Lift Vehicle | Trainee observes and listens |
| Inspect wheel bearings | Trainee observes and listens |
| Remove all 4 wheels | Trainee observes and listens |
| On drum brakes, apply dust penetrant | Trainee observes and listens |

**Inspect Disc Brakes**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Inspect brake line and hose | Trainee observes and listens |
| Inspect caliper housing | Trainee observes and listens |
| Verify caliper piston movement | Trainee observes and listens |
| Remove caliper and inspect interior | Trainee observes and listens |
| Remove brake pads | Trainee observes and listens |
| Inspect brake housing | Trainee observes and listens |

**Inspect Disc Brakes (Continued)**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Remove/Inspect caliper pins | Trainee observes and listens |
| Visually inspect brake pads | Trainee observes and listens |
| Measure thickness of brake pads | Trainee observes and listens |
| Visually Inspect surface of brake rotor | Trainee observes and listens |
| Measure the thickness of the brake rotor | Trainee observes and listens |
| Measure runout on outer surface of brake rotor | Trainee observes and listens |

**Inspect Drum Brakes**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Verify that brake components are secure | Trainee observes and listens |
| Remove brake drum | Trainee observes and listens |
| Verify that pistons inside wheel cylinder are not seized | Trainee observes and listens |
| Inspect wheel cylinder for leakage | Trainee observes and listens |
| Inspect the brake hardware | Trainee observes and listens |
| Visually inspect machined surface of brake drum | Trainee observes and listens |
| Measure inner diameter of brake drum | Trainee observes and listens |
| Visually inspect brake shoes | Trainee observes and listens |
| Measure thickness of brake shoes | Trainee observes and listens |

**Summarize results on Brake Inspection Form**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Compare actual measurements to OEM specifications | Trainee observes and listens |
| Preview the review | Trainee observes and listens |
| Role play communication of findings to trainee | Trainee observes and listens |

**Hydraulics Service and Repair**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Diagnose and repair service issues for key components | Trainee observes and listens |

**Rotor Resurfacing**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Attach proper Pro-Cut Hub adapter to the vehicle using the lug nuts and studs  | Trainee observes and listens |
| Attach Pro-Cut Machine to the Hub Adapter Using the spindle to tighten down the machine to adapter  | Trainee observes and listens |
| Set and align the cutting head to center of the rotor by using adjustment lever to align the head of the machine | Trainee observes and listens |
| Assure proper align has been made by checking front and back side of rotor before proceeding to the next step | Trainee observes and listens |
| Make sure the Pro-Cut has its brake set on the upper end of machine (orange lever around back side of the machine | Trainee observes and listens |
| Turn on Pro-Cut by pressing power switch to on ensuring one hand is on the handle of the machine for safety | Trainee observes and listens |
| Press start button so machine can calibrate rotor and hub for any run-out | Trainee observes and listens |
| After machine has finished calibrating to 2.0 or less, adjust the cutting fingers to slightly touch and cut a shallow groove into the rotor | Trainee observes and listens |
| After “rotor touch” has been made run the cutting bit very slowly towards outside of rotor to cut off lip | Trainee observes and listens |
| Run cutting head towards inside of rotor to set cutting area by rotating in cutting lever handle (black round ball on side of machine that moves in and out) as close to the rotor hat as possible | Trainee observes and listens |
| Set cutting fingers to 0 by pulling out on the Dial where the numbers are and then turn to 5 thousands of a cut but turning clockwise (never cut more than 5 thousands at a time) | Trainee observes and listens |
| Push in cutting lever handle (black round ball on side of machine) until you feel it set and lock into position, Handle will then start to rotate on its own until the rotor cut has been finished | Trainee observes and listens |
| After cut has reached the end of the rotor pull cutting lever handle ball out and disengage | Trainee observes and listens |
| Inspect inside and outside of rotor and ensure proper cut (if additional cut is needed repeat the prior 5 steps) | Trainee observes and listens |
| While machine is still rotating use sanding sponge on the inside and outside of rotor to sand down any metal shavings that have been left | Trainee observes and listens |
| Use dish soap, water and paper towel in spray bottle to clean both sides of rotor (never use shop towels) | Trainee observes and listens |
| Turn off and remove Pro-Cut machine from hub adapter and then remove hub adapter from wheel | Trainee observes and listens |

**Reassemble Parts**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Assemble brake (Including lubrication and use of new hardware) | Trainee observes and listens |
| Install wheels | Trainee observes and listens |
| Lower vehicle | Trainee observes and listens |
| Have 2nd proficient technician re-torque all wheels (even if only removing two) on the ground with torque wrench | Trainee observes and listens |
| Remove fender cover and lower hood | Trainee observes and listens |

**Test Drive Vehicle**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Technician test drives vehicle noting unusual conditions | Trainee observes and listens |

**Brake Service Training Process and Procedures**

**Step 2 Trainer Does/Trainee Explains**

**Prepare for Service**

|  |  |
| --- | --- |
| **Trainer**  | **Trainee** |
| Wears required PPE (Safety Glasses, Nitrile Gloves, Oil/Slip Resistant Shoes)  | Wears required PPE (Safety Glasses, Nitrile Gloves, Oil /Slip Resistant Shoes) |
| Prepares Tools  | Trainee observes and explains what is happening to trainer |
| Identifies vehicle information  | Trainee observes and explains what is happening to trainer |
| Determines whether brakes are disc or drum systems | Trainee observes and explains what is happening to trainer |
| Identify vehicle manufacturer’s wear limits | Trainee observes and explains what is happening to trainer |

**Test Drive Vehicle**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Test brakes | Trainee observes and explains what is happening to trainer |
| Drive vehicle into designated bay | Trainee observes and explains what is happening to trainer |

**Inspect Brake Fluid and Master Cylinder**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Raise hood and install fender covers | Trainee observes and explains what is happening to trainer |
| Check brake fluid level and record level | Trainee observes and explains what is happening to trainer |
| Test brake fluid | Trainee observes and explains what is happening to trainer |
| Inspect master cylinder | Trainee observes and explains what is happening to trainer |

**Prepare Vehicle for Brake Inspection**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Lift Vehicle | Trainee observes and explains what is happening to trainer |
| Inspect wheel bearings | Trainee observes and explains what is happening to trainer |
| Remove all 4 wheels | Trainee observes and explains what is happening to trainer |
| On drum brakes, apply dust penetrant | Trainee observes and explains what is happening to trainer |

**Inspect Disc Brakes**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Inspect brake line and hose | Trainee observes and explains what is happening to trainer |
| Inspect caliper housing | Trainee observes and explains what is happening to trainer |
| Verify caliper piston movement | Trainee observes and explains what is happening to trainer |
| Remove caliper and inspect interior | Trainee observes and explains what is happening to trainer |
| Remove brake pads | Trainee observes and explains what is happening to trainer |
| Inspect brake housing | Trainee observes and explains what is happening to trainer |
| Remove/Inspect caliper pins | Trainee observes and explains what is happening to trainer |
| Visually inspect brake pads | Trainee observes and explains what is happening to trainer |
| Measure thickness of brake pads | Trainee observes and explains what is happening to trainer |
| Visually Inspect surface of brake rotor | Trainee observes and explains what is happening to trainer |
| Measure the thickness of the brake rotor | Trainee observes and explains what is happening to trainer |
| Measure runout on outer surface of brake rotor | Trainee observes and explains what is happening to trainer |

**Inspect Drum Brakes**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Verify that brake components are secure | Trainee observes and explains what is happening to trainer |
| Remove brake drum | Trainee observes and explains what is happening to trainer |
| Verify that pistons inside wheel cylinder are not seized | Trainee observes and explains what is happening to trainer |
| Inspect wheel cylinder for leakage | Trainee observes and explains what is happening to trainer |
| Inspect the brake hardware | Trainee observes and explains what is happening to trainer |
| Visually inspect machined surface of brake drum | Trainee observes and explains what is happening to trainer |
| Measure inner diameter of brake drum | Trainee observes and explains what is happening to trainer |
| Visually inspect brake shoes | Trainee observes and explains what is happening to trainer |
| Measure thickness of brake shoes | Trainee observes and explains what is happening to trainer |

**Summarize results on Brake Inspection Form**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Compare actual measurements to OEM specifications | Trainee observes and explains what is happening to trainer |
| Preview the review | Trainee observes and explains what is happening to trainer |
| Role play communication of findings to trainer | Trainee observes and explains what is happening to trainer |

**Hydraulics Service and Repair**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Diagnose and repair service issues for key components | Trainee observes and explains what is happening to trainer |

**Rotor Resurfacing**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Attach proper Pro-Cut Hub adapter to the vehicle using the lug nuts and studs  | Trainee observes and explains what is happening to trainer |
| Attach Pro-Cut Machine to the Hub Adapter Using the spindle to tighten down the machine to adapter  | Trainee observes and explains what is happening to trainer |
| Set and align the cutting head to center of the rotor by using adjustment lever to align the head of the machine | Trainee observes and explains what is happening to trainer |
| Assure proper align has been made by checking front and back side of rotor before proceeding to the next step | Trainee observes and explains what is happening to trainer |
| Make sure the Pro-Cut has its brake set on the upper end of machine (orange lever around back side of the machine | Trainee observes and explains what is happening to trainer |
| Turn on Pro-Cut by pressing power switch to on ensuring one hand is on the handle of the machine for safety | Trainee observes and explains what is happening to trainer |
| Press start button so machine can calibrate rotor and hub for any run-out | Trainee observes and explains what is happening to trainer |
| After machine has finished calibrating to 2.0 or less, adjust the cutting fingers to slightly touch and cut a shallow groove into the rotor | Trainee observes and explains what is happening to trainer |
| After “rotor touch” has been made run the cutting bit very slowly towards outside of rotor to cut off lip | Trainee observes and explains what is happening to trainer |
| Run cutting head towards inside of rotor to set cutting area by rotating in cutting lever handle (black round ball on side of machine that moves in and out) as close to the rotor hat as possible | Trainee observes and explains what is happening to trainer |
| Set cutting fingers to 0 by pulling out on the Dial where the numbers are and then turn to 5 thousands of a cut but turning clockwise (never cut more than 5 thousands at a time) | Trainee observes and explains what is happening to trainer |
| Push in cutting lever handle (black round ball on side of machine) until you feel it set and lock into position, Handle will then start to rotate on its own until the rotor cut has been finished | Trainee observes and explains what is happening to trainer |
| After cut has reached the end of the rotor pull cutting lever handle ball out and disengage | Trainee observes and explains what is happening to trainer |
| Inspect inside and outside of rotor and ensure proper cut (if additional cut is needed repeat the prior 5 steps) | Trainee observes and explains what is happening to trainer |
| While machine is still rotating use sanding sponge on the inside and outside of rotor to sand down any metal shavings that have been left | Trainee observes and explains what is happening to trainer |
| Use dish soap, water and paper towel in spray bottle to clean both sides of rotor (never use shop towels) | Trainee observes and explains what is happening to trainer |
| Turn off and remove Pro-Cut machine from hub adapter and then remove hub adapter from wheel | Trainee observes and explains what is happening to trainer |

**Reassemble Parts**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Assemble brake (Including lubrication and use of new hardware) | Trainee observes and explains what is happening to trainer |
| Install wheels | Trainee observes and explains what is happening to trainer |
| Lower vehicle | Trainee observes and explains what is happening to trainer |
| Have 2nd proficient technician re-torque all wheels (even if only removing two) on the ground with torque wrench | Trainee observes and explains what is happening to trainer |
| Remove fender cover and lower hood | Trainee observes and explains what is happening to trainer |

**Test Drive Vehicle**

|  |  |
| --- | --- |
| **Trainer** | **Trainee** |
| Technician test drives vehicle noting unusual conditions | Trainee observes and listens |

**Brake Service Training Process and Procedures**

**Step 3 Trainee Does/Trainer Explains**

**Prepare for Service**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Wears required PPE (Safety Glasses, Nitrile Gloves, Oil/Slip Resistant Shoes)  | Wears required PPE (Safety Glasses, Nitrile Gloves, Oil /Slip Resistant Shoes) |
| Prepares Tools  | Trainer observes and provides feedback to trainee |
| Identifies vehicle information  | Trainer observes and provides feedback to trainee |
| Determines whether brakes are disc or drum systems | Trainer observes and provides feedback to trainee |
| Identify vehicle manufacturer’s wear limits | Trainer observes and provides feedback to trainee |

**Test Drive Vehicle**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Test brakes | Trainer observes and provides feedback to trainee |
| Drive vehicle into designated bay | Trainer observes and provides feedback to trainee |

**Inspect Brake Fluid and Master Cylinder**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Raise hood and install fender covers | Trainer observes and provides feedback to trainee |
| Check brake fluid level and record level | Trainer observes and provides feedback to trainee |
| Test brake fluid | Trainer observes and provides feedback to trainee |
| Inspect master cylinder | Trainer observes and provides feedback to trainee |

**Prepare Vehicle for Brake Inspection**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Lift Vehicle | Trainer observes and provides feedback to trainee |
| Inspect wheel bearings | Trainer observes and provides feedback to trainee |
| Remove all 4 wheels | Trainer observes and provides feedback to trainee |
| On drum brakes, apply dust penetrant | Trainer observes and provides feedback to trainee |

**Inspect Disc Brakes**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Inspect brake line and hose | Trainer observes and provides feedback to trainee |
| Inspect caliper housing | Trainer observes and provides feedback to trainee |
| Verify caliper piston movement | Trainer observes and provides feedback to trainee |
| Remove caliper and inspect interior | Trainer observes and provides feedback to trainee |
| Remove brake pads | Trainer observes and provides feedback to trainee |
| Inspect brake housing | Trainer observes and provides feedback to trainee |

**Inspect Disc Brakes (Continued)**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Remove/Inspect caliper pins | Trainer observes and provides feedback to trainee |
| Visually inspect brake pads | Trainer observes and provides feedback to trainee |
| Measure thickness of brake pads | Trainer observes and provides feedback to trainee |
| Visually Inspect surface of brake rotor | Trainer observes and provides feedback to trainee |
| Measure the thickness of the brake rotor | Trainer observes and provides feedback to trainee |
| Measure runout on outer surface of brake rotor | Trainer observes and provides feedback to trainee |

**Inspect Drum Brakes**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Verify that brake components are secure | Trainer observes and provides feedback to trainee |
| Remove brake drum | Trainer observes and provides feedback to trainee |
| Verify that pistons inside wheel cylinder are not seized | Trainer observes and provides feedback to trainee |
| Inspect wheel cylinder for leakage | Trainer observes and provides feedback to trainee |
| Inspect the brake hardware | Trainer observes and provides feedback to trainee |
| Visually inspect machined surface of brake drum | Trainer observes and provides feedback to trainee |
| Measure inner diameter of brake drum | Trainer observes and provides feedback to trainee |
| Visually inspect brake shoes | Trainer observes and provides feedback to trainee |
| Measure thickness of brake shoes | Trainer observes and provides feedback to trainee |

**Summarize results on Brake Inspection Form**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Compare actual measurements to OEM specifications | Trainer observes and provides feedback to trainee |
| Preview the review | Trainer observes and provides feedback to trainee |
| Role play communication of findings to trainer with trainer providing feedback | Trainer observes and provides feedback to trainee |

**Hydraulics Service and Repair**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Diagnose and repair service issues for key components | Trainer observes and provides feedback to trainee |

**Rotor Resurfacing**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Attach proper Pro-Cut Hub adapter to the vehicle using the lug nuts and studs  | Trainer observes and provides feedback to trainee |
| Attach Pro-Cut Machine to the Hub Adapter Using the spindle to tighten down the machine to adapter  | Trainer observes and provides feedback to trainee |
| Set and align the cutting head to center of the rotor by using adjustment lever to align the head of the machine | Trainer observes and provides feedback to trainee |
| Assure proper align has been made by checking front and back side of rotor before proceeding to the next step | Trainer observes and provides feedback to trainee |
| Make sure the Pro-Cut has its brake set on the upper end of machine (orange lever around back side of the machine | Trainer observes and provides feedback to trainee |
| Turn on Pro-Cut by pressing power switch to on ensuring one hand is on the handle of the machine for safety | Trainer observes and provides feedback to trainee |
| Press start button so machine can calibrate rotor and hub for any run-out | Trainer observes and provides feedback to trainee |
| After machine has finished calibrating to 2.0 or less, adjust the cutting fingers to slightly touch and cut a shallow groove into the rotor | Trainer observes and provides feedback to trainee |
| After “rotor touch” has been made run the cutting bit very slowly towards outside of rotor to cut off lip | Trainer observes and provides feedback to trainee |
| Run cutting head towards inside of rotor to set cutting area by rotating in cutting lever handle (black round ball on side of machine that moves in and out) as close to the rotor hat as possible | Trainer observes and provides feedback to trainee |
| Set cutting fingers to 0 by pulling out on the Dial where the numbers are and then turn to 5 thousands of a cut but turning clockwise (never cut more than 5 thousands at a time) | Trainer observes and provides feedback to trainee |
| Push in cutting lever handle (black round ball on side of machine) until you feel it set and lock into position, Handle will then start to rotate on its own until the rotor cut has been finished | Trainer observes and provides feedback to trainee |
| After cut has reached the end of the rotor pull cutting lever handle ball out and disengage | Trainer observes and provides feedback to trainee |
| Inspect inside and outside of rotor and ensure proper cut (if additional cut is needed repeat the prior 5 steps) | Trainer observes and provides feedback to trainee |
| While machine is still rotating use sanding sponge on the inside and outside of rotor to sand down any metal shavings that have been left | Trainer observes and provides feedback to trainee |
| Use dish soap, water and paper towel in spray bottle to clean both sides of rotor (never use shop towels) | Trainer observes and provides feedback to trainee |
| Turn off and remove Pro-Cut machine from hub adapter and then remove hub adapter from wheel | Trainer observes and provides feedback to trainee |

**Reassemble Parts**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Assemble brake (Including lubrication and use of new hardware) | Trainer observes and provides feedback to trainee |
| Install wheels | Trainer observes and provides feedback to trainee |
| Lower vehicle | Trainer observes and provides feedback to trainee |
| Have 2nd proficient technician re-torque all wheels (even if only removing two) on the ground with torque wrench | Trainer observes and provides feedback to trainee |
| Remove fender cover and lower hood | Trainer observes and provides feedback to trainee |

**Test Drive Vehicle**

|  |  |
| --- | --- |
| **Trainee**  | **Trainer** |
| Technician test drives vehicle noting unusual conditions | Trainer observes and provides feedback to trainee |

**Brake Service Training Process and Procedures**

**Step 4 Trainee Does/Trainee Explains (Trainer Provides Feedback)**

**Prepare for Service**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Wears required PPE (Safety Glasses, Nitrile Gloves, Oil/Slip Resistant Shoes)  | Wears required PPE (Safety Glasses, Nitrile Gloves, Oil /Slip Resistant Shoes) |
| Prepares Tools  | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Identifies vehicle information  | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Determines whether brakes are disc or drum systems | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Identify vehicle manufacturer’s wear limits | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Test Drive Vehicle**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Test brakes | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Drive vehicle into designated bay | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Inspect Brake Fluid and Master Cylinder**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Raise hood and install fender covers | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Check brake fluid level and record level | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Test brake fluid | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Inspect master cylinder | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Prepare Vehicle for Brake Inspection**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Lift Vehicle | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Inspect wheel bearings | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Remove all 4 wheels | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| On drum brakes, apply dust penetrant | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Inspect Disc Brakes**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Inspect brake line and hose | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Inspect caliper housing | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Verify caliper piston movement | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Remove caliper and inspect interior | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Remove brake pads | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Inspect brake housing | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Inspect Disc Brakes (Continued)**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Remove/Inspect caliper pins | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Visually inspect brake pads | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Measure thickness of brake pads | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Visually Inspect surface of brake rotor | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Measure the thickness of the brake rotor | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Measure runout on outer surface of brake rotor | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Inspect Drum Brakes**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Verify that brake components are secure | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Remove brake drum | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Verify that pistons inside wheel cylinder are not seized | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Inspect wheel cylinder for leakage | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Inspect the brake hardware | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Visually inspect machined surface of brake drum | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Measure inner diameter of brake drum | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Visually inspect brake shoes | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Measure thickness of brake shoes | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Summarize results on Brake Inspection Form**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Compare actual measurements to OEM specifications | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Preview the review | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Role play communication of findings to trainer  | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Hydraulics Service and Repair**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Diagnose and repair service issues for key components | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Rotor Resurfacing**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Attach proper Pro-Cut Hub adapter to the vehicle using the lug nuts and studs  | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Attach Pro-Cut Machine to the Hub Adapter Using the spindle to tighten down the machine to adapter  | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Set and align the cutting head to center of the rotor by using adjustment lever to align the head of the machine | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Assure proper align has been made by checking front and back side of rotor before proceeding to the next step | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Make sure the Pro-Cut has its brake set on the upper end of machine (orange lever around back side of the machine | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Turn on Pro-Cut by pressing power switch to on ensuring one hand is on the handle of the machine for safety | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Press start button so machine can calibrate rotor and hub for any run-out | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| After machine has finished calibrating to 2.0 or less, adjust the cutting fingers to slightly touch and cut a shallow groove into the rotor | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| After “rotor touch” has been made run the cutting bit very slowly towards outside of rotor to cut off lip | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Run cutting head towards inside of rotor to set cutting area by rotating in cutting lever handle (black round ball on side of machine that moves in and out) as close to the rotor hat as possible | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Set cutting fingers to 0 by pulling out on the Dial where the numbers are and then turn to 5 thousands of a cut but turning clockwise (never cut more than 5 thousands at a time) | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Push in cutting lever handle (black round ball on side of machine) until you feel it set and lock into position, Handle will then start to rotate on its own until the rotor cut has been finished | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| After cut has reached the end of the rotor pull cutting lever handle ball out and disengage | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Inspect inside and outside of rotor and ensure proper cut (if additional cut is needed repeat the prior 5 steps) | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| While machine is still rotating use sanding sponge on the inside and outside of rotor to sand down any metal shavings that have been left | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Use dish soap, water and paper towel in spray bottle to clean both sides of rotor (never use shop towels) | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Turn off and remove Pro-Cut machine from hub adapter and then remove hub adapter from wheel | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Reassemble Parts**

|  |  |
| --- | --- |
| **Trainee**  | **Trainee/Trainer** |
| Assemble brake (Including lubrication and use of new hardware) | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Install wheels | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Lower vehicle | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Have 2nd proficient technician re-torque all wheels (even if only removing two) on the ground with torque wrench | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |
| Remove fender cover and lower hood | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Test Drive Vehicle**

|  |  |
| --- | --- |
| **Trainee** | **Trainee/Trainer** |
| Technician test drives vehicle noting unusual conditions | Trainee explains what he is doing to the trainer and the trainer provides feedback if necessary |

**Repeat step 4 of the 4 step training process until the employee is proficient.**