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CHAPTER 1: INTRODUCTION

Parsons/SGS Testcom Inc. (the Contractor) has developed the NJ2009 Emissions and Safety Inspection System (NJ2009 Workstation) for use in the New Jersey inspection program. The NJ2009 Workstation transfers inspection data to the VID (Vehicle Inspection Database) using the internet. Stations are responsible for providing the internet connection for their workstation (either high speed or dial-up).

The NJ2009 workstation components are a computer, monitor, keyboard, mouse, printer and cart plus six peripheral devices.

- First of these devices is the **Bar Code Scanner**. The Bar Code Scanner is used to easily input information into the computer.
- Second, the **OBDII Scan Tool** is used to connect to 1996 and newer vehicles to collect important emission related information from the vehicle’s computer.
- Third, a **High speed internet or dial-up internet connection** to connect the NJ2009 to the Contractor computers.
- Fourth, is a **Biometric fingerprint reader** for inspector login.
- Fifth, a **Gas cap tester** to test 2000 and older vehicle gas caps. 2001 and newer vehicle gas caps are tested using the OBDII inspection tests.
- Sixth, the **WiFi antenna**.
OPTIONAL EQUIPMENT

In addition to the “base unit”, stations may also purchase the optional

- Gas Analyzer
- Diesel Opacity Meter
- Touch Screen Monitor
- Cart Cover

The equipment was designed to provide the most efficient and accurate way to perform inspections and transmit the inspection information to the State.

Future revisions of this manual will be based on the continued development of the system and comments from users. Figures 1.1 thru Figure 1.7 illustrate the NJ2009 workstation components.

NJ2009 WORKSTATION

Figure 1-1: NJ WORKSTATION
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LENOVO PC WITH LCD MONITOR, KEYBOARD, AND OPTICAL MOUSE

Figure 1-2: LENOVO PC WITH LCD MONITOR, KEYBOARD, AND OPTICAL MOUSE
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LASER PRINTER

The **Lexmark e260d series** laser printer offers high quality output, high speed printing up to 35 pages per minute and 50,000 pages per month duty cycle.

![Lexmark Laser Printer](image)

**FIGURE 1-3: LEXMARK LASER PRINTER**

BAR CODE SCANNER

The **Hand Held Product Honeywell 4600g General Purpose Reader** Bar code scanner features advanced area imaging for improved windshield scanning and support all common 1D and PDF417 symbologies, and has a 15’ cord.

![Hand Held Product Honeywell 4600g General Purpose Reader](image)
INTRODUCTION

OBDII INTERFACE MODULE

The Vetronix OBDII Interface Module is a ruggedized version of their popular scan tool and includes a heavy-duty Data Link Connector (DLC) cable.
**GAS CAP TESTER**

The *Waekon FPT27 Fuel Cap Tester* features automated testing and includes all adapters.

![GAS CAP TESTER](image)

**FIGURE 1-6: GAS CAP TESTER**

**BIOMETRIC FINGERPRINT READER**

The *Biometric Fingerprint Reader (Secu Gen Hamster Plus)* this device will be used to identify and authenticate technicians, inspectors and other personnel, features include:

- High-quality, rugged, maintenance-free fingerprint sensor with ultra-precise 500 DPI resolution,
- Auto-on automatically turns on sensor when it detects a finger,
- Smart Capture ensures quality fingerprint scanning of difficult fingers,
- Hardened fingerprint contact area that’s resistant to scratches, impact, corrosion and electrostatic discharge (ESD),
- Compact and ergonomically designed to work with any finger or thumb,
- Integrated finger guide,
- Removable, weighted stand, and
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- USB connection.

*Figure 1-7: Biometric Fingerprint Reader*
GENERAL HELP/PHONE NUMBERS

Workstation questions, Inspection procedure questions:

Please Call the NJ2009 Help Desk at 888-6NJ-2009 (888-665-2009).

NJ2009 WORKSTATION HELP

Throughout the NJ2009 Workstation software application, Help Messages are available in critical areas to provide additional information to the operator by pressing the <F1> key. On-screen messages will direct you to the correct help function.

ABOUT THIS OPERATORS MANUAL

This manual is intended to provide operating information for new users of the NJ2009 Workstation. Comments about this manual should be directed to the NJ2009 Help Desk at 888-6NJ-2009 (888-665-2009).

SAFETY INFORMATION

WARNING SYMBOLS

Throughout this manual, safety warnings and instructions will be displayed. The symbols below are used to identify information and hazards associated with a procedure or process. Be familiar with these symbols and read the warnings and instructions offered.

This is the electrical warning symbol. It indicates the danger of electrical shock that could result in personal injury to the operator or bystanders.
INTRODUCTION

WARNING!

A warning indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury to the operator or bystanders. Other symbols inside the triangle may identify specific hazards.

CAUTION!

Caution indicates that a potentially hazardous situation may exist and, if not avoided, could result in moderate or minor injury to the operator or bystanders.

Information

The information symbol indicates that helpful information or instructions follow. Pay special attention to this information to avoid damage to the equipment or unnecessary delays.

SAFETY INSTRUCTIONS

RISK OF ELECTRIC SHOCK

Connect the power cord to a properly grounded electrical outlet.

DO NOT remove the power cord-grounding pin.

DO NOT operate electrical equipment around water.

DO NOT operate the NJ2009 equipment during an electrical storm.

DO NOT operate electrical equipment with damaged power cords.

Inspect electrical cords for damage on a regular basis.
Electric shock can cause serious injury!!!!

**RISK OF PERSONAL INJURY**

Be aware that many hazardous conditions may exist in the shop environment.

Use caution when in the work area.

Wear Personal Safety Devices (PSD) when you are in the work area.

Keep the work area clean and free from hazards

**SYSTEM REQUIREMENTS**

**Power**

- Input – 115 VAC, 60 Hz, ± 12 volts

**Operating Range**

- Temperature 35°F to 110°F
- Humidity – 0% – 100%, non-condensing

**Internet Connection**

- High speed or dial-up internet service
- Local Area Network (LAN) cable with RJ45 or phone line connection
- No firewalls or other device that would restrict access to the internet
**FOR YOUR SAFETY, READ THIS MANUAL THOROUGHLY BEFORE OPERATING THE NJ2009 WORKSTATION. THE INSPECTION EQUIPMENT IS INTENDED TO BE OPERATED BY PROFESSIONAL AUTOMOTIVE TECHNICIANS. PAY SPECIAL ATTENTION TO SAFETY MESSAGES PRESENTED THROUGHOUT THIS MANUAL. THIS MANUAL PROVIDES INFORMATION ABOUT THE PROPER CARE AND SAFE OPERATION OF THE NJ2009 WORKSTATION. IMPROPER OPERATION OF THE EQUIPMENT MAY RESULT IN POSSIBLE DAMAGE TO THE EQUIPMENT AND/OR PERSONAL INJURY.**

**BEFORE USING THE NJ2009 EMISSIONS AND SAFETY INSPECTION EQUIPMENT, ALWAYS REFER TO AND FOLLOW ALL SAFETY INSTRUCTIONS AND PROCEDURES PROVIDED.**
Chapter 2
Main Menu
CHAPTER 2: MAIN MENU

The NJ2009 Workstation automatically opens the Main Menu when the workstation is powered on. It will take a couple minutes for the software to load before you see the Main Menu Screen.

![Main Menu](image)

**FIGURE 2-1: MAIN MENU**

The main menu is comprised of the following menus:

1. **Vehicle Inspection Menu** - Access to the following menus:
   - (1) Inspection options/ Perform Inspections
(2) Reprinting VIRs
(3) Provide replacement stickers
(4) DLC Locator Reference
(5) Training features and operator manual

(2) Diagnostic Menu – Access to the following menus:
- Diagnostic OBDII scan tool
- Opacity testing (if equipped for diesel testing)
- Gas emissions testing (if equipped with a gas bench)

(3) Equipment Checks and Calibrations Menu – Access to the following menus:
- (1) Calibrate/check all
- (2) Printer and Barcode scanner check
- (3) Gas Analyzer calibration
- (4) Gas Analyzer leak check
- (5) Gas Cap calibration
- (6) Smoke Meter calibration

(4) Utilities Menu – Access to the following menus:
- (1) Data file refresh
- (2) Workstation status
- (3) Printer setup
- (4) Request remote help
(5) View Messages – View State and Contractor Messages

(6) Service Menu (Field Service Rep access only)

(7) Workstation Menu – Access to the following menus:

- (1) Perform a data file refresh
- (2) Change the workstation menu access password
- (3) Enter equipment maintenance information
- (4) Update workstation software from a CD
- (5) Setup the workstation internet settings
- (6) Check the internet connection
- (7) Initialize or closeout the workstation
- (8) Print station reports
- View station information

(8) State Menu (State Inspector access only)

(9) Repair Data Entry - Provides a form to enter vehicle emission repair information:

Shutdown - CAUTION! Shuts down the workstation safely. NEVER SHUT DOWN THE WORKSTATION BY UNPLUGGING THE POWER CORD OR SWITCHING OFF THE POWER STRIP BEFORE USING THE SHUTDOWN MENU OPTION AND WAITING FOR THE COMPUTER TO POWER DOWN.
DAMAGE TO WORKSTATION SOFTWARE MAY RESULT. YOU MAY BE BILLED FOR REPAIRS.
Chapter 3
Workstation Operation
CHAPTER 3: NJ2009 WORKSTATION OPERATION

TURNING THE WORKSTATION ON

1. Connect the power cord to a grounded electrical outlet.
2. Switch the power switch on the back of the workstation to the On position. The power switch will illuminate.
3. Open the PC access panel located on the front of the workstation.
4. Press the PC power button and release. The green power indicator will illuminate.
5. Verify that the monitor is turned on. The power indicator should be illuminated.
6. Wait for the workstation application to load. This may take a couple minutes. The screen will display a progress bar. When the application is loaded, the Main Menu will be displayed.

WORKSTATION OPERATION CAUTIONS

1. NEVER operate the workstation in a wet area.
2. NEVER operate the workstation with the rear compartment door open.
3. **CAUTION! NEVER** unplug the workstation power cord with the PC turned on.

4. **CAUTION! NEVER** unplug the workstation to abort an inspection. System files can be damaged resulting in workstation lockout.

5. **CAUTION! NEVER** turn the PC off with the application running. System files may be damaged resulting in workstation lockout.

### SHUTTING DOWN THE WORKSTATION

1. **ALWAYS** use the Shutdown selection on the Main Menu to shut down the workstation.

### LOADING NEW SOFTWARE

Software updates will usually be downloaded over the internet to your workstation automatically. Follow any instructions displayed when updates are being downloaded. **NEVER** turn off the PC or unplug the power cord when updates are being downloaded.

In the event a software update cannot be downloaded over the internet, a CD will be provided.

1. Open the PC access door on the front of the workstation.

2. Press the CD drive button to open the CD drawer.

3. Insert the CD and press the CD drive button to close the CD drawer.

4. Select (7) Workstation Menu from the Main Menu.

5. Enter the station password and select OK.

6. Then, select (4) Update Software from CD.
7. When the update is complete, remove the CD, and store it for safety. The CD may be needed again if a system re-image is required. Do Not discard the CD.
Chapter 4

Vehicle Inspection Menu (1)
CHAPTER 4: VEHICLE INSPECTION MENU (1)

The NJ2009 Workstation automatically opens the Main Menu when the workstation is powered on. It will take a couple minutes for the software to load.

**VEHICLE INSPECTION MENU**

**STEP 1.** Select *(1) Vehicle Inspection Menu>*
(1) PERFORM INSPECTION

STEP 2. Select (1) Perform Inspection from the (1) Vehicle Inspection Menu to perform inspection.

Figure 4-2: Vehicle Inspection Menu
STEP 3. Follow the screen instructions and enter or scan your inspector number and access code or if the fingerprint reader is active, place your index finger on the fingerprint reader screen.

Note, for Bus or other inspection performed at a mobile facility, the application will prompt for inspection location.

STEP 4. Click on OK to continue.

Figure 4-3: Vehicle Inspection Menu Log In Screen Manual Entry
STEP 5. **Scan** the vehicle VIN barcode

- Select *<Unable to Scan>* if you are unable to scan the vehicle VIN.

*Figure 4-4: Scan Vehicle VIN Screen*
STEP 6. If unable to scan, enter vehicle VIN information, and Select <Next> to continue.

*FIGURE 4-5: VEHICLE VIN MANUAL ENTRY*
STEP 7. Scan Registration Document.

- If you are unable to scan the registration barcode or the document is missing, Select Unable to scan to enter the VIN manually and continue to Step 8.
- Select Document Missing and continue to Step 9.

*Figure 4-6: Scan Vehicle Registration*
STEP 8. Unable to scan enter document VIN Manually.

Figure 4-7: Document VIN Manual Entry
STEP 9. License Plate Manual Entry, Enter License plate number, choose State, and Select <Next> to continue.

*Figure 4-8: License Plate Manual Entry*
STEP 10. Scan failed VIR barcode if motorist has one.

- For initial inspection, Select “No failed VIR”.
- For a reinspection, Scan the failed VIR.
- For an abort, Select “Cancel inspection”.

STEP 11. Select “No Failed VIR” to continue.

![Failed VIR Check Screen](image-url)
STEP 12. Next, select the month and year of the old inspection sticker (sticker currently on vehicle). If there is no old sticker, leave the Month and Year blank. Select Next to continue.

*Figure 4-10: Enter Old Sticker Date Screen*
STEP 13. Vehicle information is populated, see figure below.

- Enter the Vehicle information in the appropriate fields.
- Click <Next> to continue to next Step.
- To Change VIN/Plate select option and repeat Step 5 – Step 13.

*Figure 4-11: Document VIN Manual Entry*
STEP 14. Next, Selected Tests are displayed that will be performed. Then select <OK> to continue.

**Figure 4-12: Selected Tests Screen**
STEP 15. Next, Summary (Credentials Test) will be displayed, to change any item from Pass to Fail select the menu option and make the required change. (See example on the following page)

STEP 16. If no change is needed select Complete to continue to Step 17.
Example: To change from Pass to Fail, Select (1) Driver’s License and Select “Drivers license: Failure” as in Figure 4-14.

![Figure 4-14: (1) Driver’s License Summary Credentials](image-url)
STEP 17. Pre-Test Inspection Standard IM Safety Test is displayed—Inspect the vehicle for any conditions that could be a risk to the operator or vehicle during the inspection and test routines, such as leaking fluids, leaking/broken exhaust system, frayed drive belts, and unusual noises.

- Are the vehicles safe for testing? Select, Yes or No?

- Select <Yes> and continue to next step.
STEP 18.  **Summary Standard IM Safety Test**, select each Safety Test option that does not pass the safety test.

Example: Select - (1) **Safety Equipment**, and continue to next step.
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VEHICLE INSPECTION MENU (1)

STEP 19. From the Safety Equipment Menu select equipment to change.

Example: Select (1) Lights, go to next step.

![Safety Equipment Standard IM Safety Test Screen](image)

*Figure 4-17: Safety Equipment Standard IM Safety Test Screen*
STEP 20. Lights Safety Test, select all those that apply and click <OK> to return to the Summary Menu above in Step 18. Then select <Complete> to continue to next step.

FIGURE 4-18: STANDARD IM SAFETY TEST - LIGHTS OPTIONS
STEP 21. Begin Catalytic Converter Visual Inspection (Tamper Check), was this vehicle originally equipped with a catalytic converter as manufactured? Select Yes or No.

STEP 22. If Yes, Select <Yes> and continue to Step 24.

STEP 23. If No, Select <No> and continue on to Step 26.

Figure 4-19: Begin Catalytic Converter Visual Inspection
STEP 24. Next, Perform Catalytic Converter Visual Inspection (Tamper Check)

- Is this vehicle equipped with a correctly installed catalytic converter?

- Select Yes or No.

STEP 25. If <Yes> continue on to Step 26.

Figure 4-20: Perform Catalytic Converter Visual Inspection
STEP 26. Next, Perform Leak Check (Liquid Leak Check).

STEP 27. Examine the vehicle for visible liquid leaks and indicate if the vehicle passes or failed the liquid leak check.

STEP 28. Check for liquid leaks and select Pass or Fail.

- Selecting <Pass> or <Fail> will bring you to the next step.
STEP 29.  Next, Perform Test (Visible Smoke Test).  Follow the on screen instructions.  If there is visible smoke, select <Fail>.  If there is no visible smoke, select <Pass>.

STEP 30.  Selecting Pass or Fail will bring you to the next step.

Figure 4-22: Perform Test “Visible Smoke Test” Screen

1. Secure emergency/braking brake, turn all accessories off, set the vehicle to neutral gear.
2. Turn the ignition key to start the engine and allow the vehicle to idle until it runs smoothly.
3. Slowly increase the engine speed above idle for about 3 seconds.
4. Select FAIL if there is visible smoke in the exhaust or crankcase emissions for a period in excess of 3 consecutive seconds. Otherwise select PASS.
STEP 31. Next, Key On Engine Off (KOEO) MIL Check. Select Yes or No.

- Select <Yes> and continue on to Step 35.

- If No, continue to Step 32.

*Figure 4-23: Key On Engine Off (KOEO)*

Turn the ignition key to the on position but do not start the engine. MIL illumination may be continuous or may stay on for a few seconds.

Is the Malfunction Indicator Light (MIL) illuminated?
STEP 32. Turn Key off MIL Check - MIL Flashing or On, turn the key to off position and press <Next> to continue to follow step.

*Figure 4-24: TURN KEY OFF (MIL CHECK)*
STEP 33. Next, Key off Timer MIL Check Screen will appear to indicate the time needed to keep the key in the off position and wait.

STEP 34. Click <Next> and return to Step 31 “Key On Engine Off (KOEO) MIL Check” screen.

*Figure 4-25: Key Off Timer (MIL Check)*
STEP 35. Next, Key On Engine Running (KOER) MIL Check.

- Start the engine.
- Did the MIL go out?
- Select Yes or No.
- Select <Yes> to continue to next step.

*FIGURE 4-26: KEY ON ENGINE RUNNING (KOER)*

**Turn the ignition key to start the engine and allow the vehicle to idle. MIL illumination may be continuous or may stay on for a few seconds.**

Is the Malfunction Indicator Light (MIL) illuminated?
STEP 36. Next, Connect to DLC - If the DLC is located and the OBDII scanner cable is connected, select <Yes>, and continue to Step 40.

- If you can’t locate the vehicles DLC connector, press <F1> to display the location of the DLC connector.
- If the DLC can’t be connected, select <No> and continue to Step 37.

**Figure 4-27: Connect to DLC “OBDII Test” Screen**
STEP 37. If No, indicate the reason you are unable to connect to the DLC.

STEP 38. Choose from the drop down menu:

- Damaged
- Missing
- Obstructed

STEP 39. Select <Next> and continue to Step 43.

![Figure 4-28: DLC Not Connected Reason - OBDII](image-url)
STEP 40. OBDII Test in progress…

- Select Pass, Fail, Comm Error, or Equipment to reflect OBD readings.

- If <Pass> is selected continue to the next step.

*Figure 4-29: OBDII Test In Progress*
STEP 41. Select <Pass>, See test in progress message below.

**Figure 4-30: Test In Progress Cont.**
STEP 42. Emissions test is now complete.

- Disconnect the OBDII cable from the vehicle’s DLC connector.
- Select <OK> to continue.

*Figure 4-31: Emissions Test Complete*
STEP 43. Gas Cap Checklist (Gas cap Test)

- Follow Gas Cap test questions on the screen and Select Yes or No.

- Select Next to continue.

*Figure 4-32: Gas Cap Checklist (Gas Cap Test)*
STEP 44. Gas Cap Test In Progress

- Select Pass, Fail, Device Error, or Timeout to continue.

- Select Pass to continue to next step.
STEP 45. Multiple Gas Cap Check

- If Vehicle has another gas cap to test, **Select Yes**, if not **Select No**.
- If **Yes**, repeat **Steps 35 and 36** above.
- **Select No** if vehicle there are no other Gas Caps and **continue to next step**.

*Figure 4-33: Multiple Cap Check (Gas Cap Test)*
STEP 46. Gas Cap Test Complete

- If test is complete, remove the gas cap from the adapter and re-install the gas cap(s) on the vehicle.

- Select OK to continue to next step.

![Image of Test Complete (Gas Cap Test)](njinspections.png)

*Figure 4-34: Test Complete (Gas Cap Test)*
STEP 47. Miscellaneous Emissions Test

- Follow instructions on screen and Select Next to continue.

*Figure 4-35: Miscellaneous Emissions Test*
STEP 48. Clarification Emissions

STEP 49. Follow instructions on screen and Select Next to continue.

Figure 4-36: Clarification (Emissions Clarification)
STEP 50. Enter the inspection fee. Select Next to continue.

![Figure 4-37: Enter Inspection Fee Screen]

*Figure 4-37: Enter Inspection Fee Screen*
STEP 51. Next, the Vehicle Inspection Report (VIR) will print. When the printing is complete, select **OK** to continue.

*Figure 4-38: Inspection Status "Printing VIR" Screen*
The screen will return to the **Main Menu**.

![Main Menu Screen](image-url)

**Figure 4-39: Main Menu Screen**
STEP 1. Select (2) Reprint VIR from the (1) Vehicle Inspection Menu.

![Vehicle Inspection Menu]

*Figure 4-40: Vehicle Inspection Menu*
STEP 2. To Reprint VIR you must enter into the VIN the VIR reference number. Select <Done> when complete.

FIGURE 4-41: REPRINT VIR WEBSITE
(4) DLC LOCATION REFERENCE

STEP 1. Select (4) DLC Location Reference from the (1) Vehicle Inspection Menu.

![Vehicle Inspection Menu](image)

*Figure 4-42: Vehicle Inspection Menu*
STEP 2. DLC Location Vehicle Information Menu, Enter Model year, Make and Model, Select <Next> to see illustration of the DLC location for your vehicle.

FIGURE 4-43: DLC VEHICLE INFORMATION ENTRY MENU
STEP 3. DLC Location Reference Map of the location where the DLC is located for this example vehicle. Note highlighted area, #1 indicating the location.

STEP 4. Select OK to return to the Vehicle Inspection Menu.

Figure 4-44: DLC Location Map
Chapter 5

The Diagnostics Menu (2)
The NJ2009 Workstation automatically opens the Main Menu when the workstation is powered on. It will take a couple minutes for the software to load.

*Figure 5-1: Main Menu Screen*
Diagnostic Test Menu (2)

From the Main Menu Select (2) Diagnostic Test Menu.

(1) OBDII Scan

STEP 1. Select (1) OBDII Scan

![Figure 5-2: Diagnostic Test Menu Screen](image)
STEP 2. Next, “Enter vehicle Information”.

STEP 3. Locate the vehicle's OBDII Diagnostic Link Connector (DLC) and attach the workstation OBDII Cable.

STEP 4. Select next to continue.

Note: If you do not want to continue with the OBDII Diagnostic Test select cancel.
STEP 5. Next, Connect to DLC Screen, follow steps 1-3 or Press <F1> for help locating the vehicles DLC.

STEP 6. Could the DLC be located and a connection made? Select Yes or No.

STEP 7. If Yes, continue to next step.

**Figure 5-4: Connect to DLC Screen**

1. Turn off the vehicle before connecting the Diagnostic Link Connector (DLC).
2. Locate the vehicle’s OBDII DLC and attach the workstation OBDII cable.
3. Turn on the vehicle's engine.

Press F1 for help locating the vehicle's DLC.

Could the DLC be located and a connection made?
STEP 8. Next, OBDII Scan in Progress message appears, now Verify your connection to the OBDII module.

STEP 9. Then select appropriate OBD reading.

STEP 10. If reading is Pass, select <Pass> to continue with OBDII Diagnostic Test.

FIGURE 5-5: OBDII SCAN IN PROGRESS SCREEN
STEP 11. View/Print OBDII Scan Results

STEP 12. Select <OK> to return to the Diagnostic Test Menu or <Print> for print copy of results.

FIGURE 5-6: OBDII SCAN RESULTS
(2) OPACITY DIAGNOSTIC TEST

Note: Screen displays for diagnostic check may vary from screens used for actual inspection.

STEP 1. From the Diagnostic Test Menu, Select (2) Opacity Diagnostic Test.
STEP 2. Start Opacity Diagnostic Test, enter requested information in each field and Select Next.

Please note: Message below is only showed on manual Opacity test.

“This is not an official test. Results of this diagnostic test may not be indicative of the actual inspection results. The results of this test should be used for diagnostic purposes only”.

**Figure 5-8: Start Opacity Diagnostic Test**
STEP 3. Turn Off Accessories (Diesel Opacity Test)

STEP 4. Turn off the engine brake and all vehicle accessories, including, but not limited to, air conditioning, heating, defroster, radio, and lights.

STEP 5. Select <Next> to continue.

**FIGURE 5-9: TURN OFF ACCESSORIES DIESEL OPACITY TEST SCREEN**
STEP 6. Test Selection (Diesel Opacity Test) - Select Test to be performed.

- (1) Rolling Acceleration
- (2) Power Brake
- (3) Snap Acceleration

(1) Rolling Acceleration:

STEP 1. Select (1) Rolling Acceleration

Figure 5-10: Test Selection (Diesel Opacity Test)
STEP 2. Connect Smokemeter (Diesel Opacity Test)

STEP 3. Follow instructions on screen, Click <Next> to continue.

**Figure 5-11: Connect Smokemeter (Diesel Opacity Test)**

- Affix the RPM sensor to the engine and vehicle according to the smokemeter manufacturer’s instructions
- Insert the engine oil temperature sensor into the oil dipstick tube and into the crankcase oil according to the smokemeter manufacturer’s instructions
- Connect the engine RPM and oil temperature sensors to the smokemeter according to the smokemeter manufacturer’s instructions
- Affix the smokemeter according to the manufacturer’s instructions to the end of the vehicle’s exhaust pipe.
STEP 4. Next, Start Rolling Acceleration Test

- Select what the result of the smokemeter test should be.

STEP 5. Smokemeter Pass - Select Pass to continue to the next step.

*Figure 5-12: Start Rolling Acceleration Test (Diesel Opacity Test)*
STEP 6. View/Print Opacity Diagnostic Test Results (Start Rolling Acceleration)

STEP 7. Select <OK> to return to the Diagnostic Test Menu or <Print> for print copy of results.

Figure 5-13: Opacity Diagnostic Test Results

This is not an official test. Results of this diagnostic test may not be indicative of the actual inspection results. The results of this test should be used for diagnostic purposes only.

Make: ACURA
Model: CSX
Model Year: 2009
Ambient temperature: 35.5°
Barometric pressure: 0
Relative humidity: 0
Dewpoint: 0

Opacity: 0
Oil temp: 0
Max RPM: 0
Min RPM: 0
Rise time: 0

Opacity: 0
Oil temp: 0
Max RPM: 0
Min RPM: 0
Rise time: 0

Opacity: 29.8
Oil temp: 140°
Max RPM: 0
Min RPM: 0
Rise time: 4

Opacity average: 29.8
Opacity spread: 5°
Zero drift: 1.2°
(2) Power Brake Test

STEP 1. Follow steps 1-6 above from the Diagnostic Test Menu (See Figure 5-5 thru Figure 5-9) and Select (2) Power Brake

Figure 5-14: Test Selection (Diesel Opacity Test)
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OPACITY DIAGNOSTIC TEST (2)

STEP 2. Connect Smokemeter (Diesel Opacity Test)

STEP 3. Follow instructions on screen, Click <Next> to continue.

- Affix the RPM sensor to the engine and vehicle according to the
  smokemeter manufacturer’s instructions

- Insert the engine oil temperature sensor into the oil dipstick tube and
  into the crankcase oil according to the smokemeter manufacturer's
  instructions

- Connect the engine RPM and oil temperature sensors to the smokemeter
  according to the smokemeter manufacturer's instructions

- Affix the smokemeter according to the manufacturer’s instructions to the
  end of the vehicle’s exhaust pipe.

FIGURE 5-15: CONNECT SMOKEMETER (DIESEL OPACITY TEST)
STEP 4. Start Power Brake Test

- Select what the result of the smokemeter test should be.

STEP 5. Smokemeter Pass - Select Pass to continue to the next step.

**Figure 5-16: START POWER BRAKE TEST (DIESEL OPACITY TEST)**
STEP 6. View/Print Opacity Diagnostic Test Results (Power Break Test)

STEP 7. Select <OK> to return to the Diagnostic Test Menu or <Print> for print copy of results.

**FIGURE 5-17: OPACITY DIAGNOSTIC TEST RESULTS (POWER BREAK TEST)**
(3) Snap Acceleration Test:

STEP 1. Follow steps 1-6 above from the Diagnostic Test Menu (See Figure 5-5 thru Figure 5-9) and Select (3) Snap Acceleration
STEP 2. Start Snap Acceleration Test

- Select what the result of the smokemeter test should be.

STEP 3. Smokemeter Pass - Select Pass to continue to the next step.

*FIGURE 5-19: START SNAP ACCELERATION TEST (DIESEL OPACITY TEST)*
STEP 4. View/Print Opacity Diagnostic Test Results (Snap Acceleration Test)

STEP 5. Select <OK> to return to the Diagnostic Test Menu or <Print> for print copy of results.

**Figure 5-20: Opacity Diagnostic Test Results (Snap Acceleration Test)**
(3) Gas Emissions Readings

STEP 1. From the Diagnostic Test Menu, Select (3) Test Gas Emissions Readings.

*Figure 5-21: Diagnostic Test Menu*
STEP 2. Enter Vehicle Info (Gas Diagnostic Test)

STEP 3. Enter requested information and Select <Next> to continue.

*Figure 5-22: Enter Vehicle Info (Gas Diagnostic Test)*

This is not an official test. Results of this diagnostic test may not be indicative of the actual inspection results. The results of this test should be used for diagnostic purposes only.
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OPACITY DIAGNOSTIC TEST (2)

STEP 4. Gas Emission Readings Start

STEP 5. Follow instructions on the screen, Select <Next> to continue.

FIGURE 5-23: GAS EMISSIONS READING START

Gas Emissions Readings Start

This is not an official test. Results of this diagnostic test may not be indicative of the actual inspection results. The results of this test should be used for diagnostic purposes only.

1. Keep the transmission in park or neutral.
2. All accessories must be turned off.
3. Insert the exhaust sample probe in the tailpipe.
4. Connect the RPM probe.
5. Turn on the engine.
6. Turn the zero air cylinder on.
STEP 6. Zero Calibration Message (Gas Diagnostic Test)

Figure 5-24: Zero Calibration (Gas Diagnostic Test)
STEP 7. Message to turn off the zero air cylinder is displayed; Select <OK> to continue.

Please turn off the zero air cylinder.

Figure 5-25: Turn Off Zero Air Cylinder Message
Chapter 6

Equipment Checks and Calibrations (3)
CHAPTER 6: EQUIPMENT CHECKS/CALIBRATIONS MENU

EQUIPMENT CHECKS AND CALIBRATIONS MENU

STEP 1. From the Main Menu Select (3) Equipment Checks and Calibrations Menu.

Figure 6-1: MAIN Menu Screen
STEP 2. Scan badge number of enter login information.

STEP 3. Click OK to continue.

**Figure 6-2: Log In Screen - Scan or Enter Badge/Access Code**
(2) PRINTER AND BARCODE

STEP 4. From the Calibration/Check Menu, Select (2) Printer and Barcode Scanner Check.
STEP 5. Verify that the text, the 1D, and 2D barcodes have printed correctly.

STEP 6. Select Yes or No.

If Yes, continue to Step 7.

Figure 6-4: Verify Printing "Printer and Barcode Scanner Check" Screen
STEP 7. Scan the 1D barcode on the printer test page.

*Figure 6-5: Scan 1D Barcode "Printer and Barcode Scanner Check" Screen*
STEP 8. Verify your Barcode scanner and Printer Equipment check results.

STEP 9. Click OK.

Please note, example below illustrates a failed result. If pass, screen will display Barcode scanner: Passed.

![Image of Results Screen]

*Figure 6-6: Results "Printer and Barcode Scanner Check" Screen*
STEP 10. Completed Calibration test message will be displayed, Select <OK> to return to the Calibration/Check Menu.

Figure 6-7: Completing Calibration Completed Message
Chapter 7

The Utilities

Menu (4)
CHAPTER 7: THE UTILITIES MENU

Utilities Menu

From the Main Menu select (4) Utilities Menu.

Within the (4) Utilities menu option there are several functions available, see the different options below in Figure 7-1 to Figure 7-7.
(1) Data File Refresh From The Utilities Menu

Figure 7-2: Utilities Menu
DATA FILE REFRESH MESSAGE

**FIGURE 7-3: DATA FILE REFRESH SCREEN**
(2) **WORKSTATION STATUS SCREEN FROM THE UTILITIES MENU.**

![Workstation Status Screen](image)

**Figure 7-4: Workstation Status Screen**
(3) **Printer Setup Screen from the Utilities Menu**

![Printer Setup Screen](image)

*Figure 7-5: Printer Setup Screen Option*
(4) REQUEST REMOTE HELP SCREEN FROM THE UTILITIES MENU

- You will be prompted to enter the daily password, which must be requested by the helpdesk.
- Click OK to continue.

Please call the help desk at 1-888-665-2009 to obtain the daily password for accessing this function.

Daily password: 

![Image of request remote help screen]

**Figure 7-6: Request Remote Help Screen Entry**

1. Once the daily password is entered and you choose <OK> you will be returned to the Utilities Menu.
(5) Internet Connection Check Screen from the Utilities Menu

- Verify your connection if any problems contact the help desk at 1-888-665-2009.
- Click OK to return to the Utilities Menu.

![Internet Connection Check Screen](image)

**Figure 7-7: Internet Connection Check Screen**
(6) Dial Tone Check Screen from the Utilities Menu

- If any problems with connection contact the help desk at 1-888-665-2009
- Click OK to return to the Utilities Menu.

Figure 7-8: Dial Tone Check Screen
Chapter 8

View Messages

(5)
CHAPTER 8: VIEW MESSAGES

1. From the Main Menu, select (5) Messages.

*Figure 8-1: Main Menu Screen*
2. All messages will be listed with the newest message listed first. All messages are listed in order of the date they were sent.

3. Click on the message you wish to view and select OK.

Figure 8-2: Messages Screen
Chapter 9

The Workstation Management Menu (7)
CHAPTER 9: THE WORKSTATION MANAGEMENT MENU

1. From the Main Menu, select (7) Workstation Management Menu.
2. Enter Workstation password to continue.

![Workstation Password Screen](image)

*Figure 9-2: Workstation Password Screen*
From the **Workstation Management Menu**, select option (1) **Data File Refresh**.

*Figure 9-3: Workstation Management Menu Screen*
(1) **DATA FILE REFRESH SCREEN**

*Figure 9-4: DATA FILE REFRESH SCREEN*
(2) **Change Workstation Password**

- Enter new password and confirm click `<OK>` to complete change and return to the Workstation Menu.

*Figure 9-5: Change Workstation Password Screen*
(3) **Equipment Maintenance**

- Enter equipment information and click **OK** to return to the Workstation Management Menu.

*Figure 9-6: Equipment Maintenance Screen*
(4) **Update Software from CD**

*Figure 9-7: Software Update from CD Screen*

An update CD was not found in the CD-ROM drive.

For assistance, please contact the help desk at 1-888-665-2009.

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Created on: October 26, 2009
(5) Internet Access Setup

**Figure 9-8: Internet Access Setup Screen**
(6) INTERNET CONNECTION CHECK

**Figure 9-9: Internet Connection Check Screen**

The internet connection check **Passed**.

For assistance, please contact the help desk at 1-888-665-2009.

Check Again

OK
(7) INITIALIZATION

- See Figure 9-10 to Figure 9-12 for steps to initialize workstation.
  a. Scan Workstation ID.

![Scan Workstation ID Screen](image)

*Figure 9-10: Scan Workstation ID Screen*
b. Scan Facility ID.

![Scan Facility ID Screen](image)

*Figure 9-11: Scan Facility ID Screen*
c. View Facility Information.

**FIGURE 9-12: VIEW FACILITY INFORMATION SCREEN**
(8) REPORTS MENU

Figure 9-13: Reports Menu
(9) **VIEW FACILITY INFORMATION**

![View Facility Information Screen](image)

*Figure 9-14: View Facility Information Screen*
Select option (0) Main Menu to return to the Main Menu from the Workstation Management Menu.
Chapter 10
Repair Data
Entry (9)
CHAPTER 10:  REPAIR DATA ENTRY

1. From the Workstation Management Menu, select option (9) Repair Data Entry.

Repair Data Entry is where the customer inputs any vehicle repair’s they have performed.

*Figure 10-1: Main Menu Screen*
2. Enter your user name and password and click Login to enter the New Jersey Vehicle Inspection Portal.

![ERF Repair Data Entry Login Screen](image)

*Figure 10-2: ERF Repair Data Entry Login Screen*
Chapter 11

Troubleshooting
CHAPTER 11: TROUBLESHOOTING

**ViewSonic 17” LCD monitor troubleshooting procedures:**

**No power**

Make sure power button (or switch) is ON.

Make sure A/C power cord is securely connected to the LCD display.

Plug another electrical device (like a radio) into the power outlet to verify that the outlet is supplying proper voltage.

**Power is ON but no screen image**

Make sure the video cable supplied with the LCD display is tightly secured to the video output port on the back of the computer. If the other end of the video cable is not attached permanently to the LCD display, tightly secure it to the LCD display.

Adjust brightness and contrast.

If you are using a Macintosh older than G3, you need a Macintosh adapter.

**Wrong or abnormal colors**

If any colors (red, green, or blue) are missing, check the video cable to make sure it is securely connected. Loose or broken pins in the cable connector could cause an improper connection.

Connect the LCD display to another computer.

If you have an older graphics card, contact ViewSonic® for a non-DDC adapter.

**Control buttons do not work**
Press only one button at a time.

(Troubleshooting procedures courtesy of ViewSonic)
Honeywell HHP 4600 barcode scanner troubleshooting procedures:

The Bar Code Scanner automatically performs self-tests whenever you turn it on.

If your Bar Code Scanner is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem:

Is the power on?

Is the aiming beam on?

If the aiming beam is not illuminated, check to make sure that:

- The cable is connected properly.
- The host system power is on (if external power is not used).
- The trigger works.

Is the imager having trouble reading your symbols?

- If the imager isn’t reading symbols well, check that the symbols:
  - Are not smeared, rough, scratched, or exhibiting voids,
  - Are not coated with frost or water droplets on the surface, or
  - Are enabled in the imager or in the decoder to which the imager connects.

If the connections and power supply are Ok, please call the NJ2009 Help Desk for assistance @ 1-888-6NJ-2009 or (888-665-2009).

If the Bar Code Scanner won’t read your bar code at all.

Call the NJ2009 Help Desk for assistance @ 1-888-6NJ-2009 or (1-888-665-2009).
RESET THE BAR CODE SCANNER SETTINGS

CAUTION:

Do not attempt to reset or reprogram your Bar Code Scanner. If you are having difficulty with your bar code scanner, call the NJ2009 Help Desk at 1-888-6NJ-2009 or (1-888-665-2009) for assistance.

- In the event that the NJ2009 Help Desk Customer Service Agent determines that your bar code scanner requires reprogramming, you will be instructed to scan the Default bar code below.

- **DO NOT SCAN THIS BAR CODE UNLESS INSTRUCTED TO DO SO...**

  Default

(Troubleshooting procedures courtesy of Honeywell and SGS Testcom Inc.)
Waekon FPT27 Gas Cap Tester Troubleshooting Procedures:

(Troubleshooting procedures courtesy of Waekon)
Printer Jams

Troubleshooting Procedures
PRINTER JAMS

- Accessing jammed areas
- Understanding jam lights and access locations
- Clearing jams behind the photo conductor kit and toner cartridge
- Clearing jams from the standard exit bin
- Clearing jams from tray 1
- Clearing jams from tray 2
- Clearing jams in the manual feeder
- Clearing jams behind the rear door
Accessing jam areas

Open doors and remove trays to access jam areas. The following illustration shows possible jam areas:

<table>
<thead>
<tr>
<th>Access point</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Push button to open the front door. Inside this door is the unit housing the toner cartridge and photoconductor kit.</td>
</tr>
<tr>
<td>2</td>
<td>Standard exit bin</td>
</tr>
<tr>
<td>3</td>
<td>Front door</td>
</tr>
<tr>
<td>4</td>
<td>Manual feeder door</td>
</tr>
<tr>
<td>5</td>
<td>Standard 250-sheet tray (Tray 1)</td>
</tr>
<tr>
<td>6</td>
<td>Optional tray (Tray 2)</td>
</tr>
<tr>
<td>7</td>
<td>Rear door</td>
</tr>
</tbody>
</table>

Understanding jam lights and access locations

The following table lists the jam lights and messages and provides brief instructions for how to access each jam. More detailed instructions follow.

**Note:** The jam messages listed appear on the virtual display of the Embedded Web Server.

200.yy Paper jam

![Jam Light Image]
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OPERATORS INSTRUCTION MANUAL

TROUBLESHOOTING GUIDE (PRINTER JAM)

Try one of the following:
- Remove Tray 1.
- Open the front door, and then remove the photoconductor kit and toner cartridge unit.

201.yy Paper jam
- On
- On
- On
- On
- On

Open the front door, and then remove the photoconductor kit and toner cartridge unit.

202.yy Paper jam
- On
- On
- On
- On

Open the front door, and then open the rear door.
231.yy Paper jam
\- On
\ - Blinks
\ - On
Open the front door, and then open the rear door.

233.yy Paper jam
\ - On
\ - Blinks
\ / \ / \ - Blinks
\ - On
Try one of the following:
* Remove Tray 1, and then depress the lever.
* Open the front door, and then open the rear door.

234.yy Paper jam
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TROUBLESHOOTING GUIDE (PRINTER JAM)

Try one of the following:
- Open the front door, and then open the rear door.
- Remove Tray 1, and then depress the lever.

Remove the jam from the standard exit bin.

Try one of the following:
- Remove Tray 1.
- Open the front door, and then remove the photoconductor kit and toner cartridge unit.
- Remove Tray 2.
251.yy Paper jam

1  On

W  On

- On

- On

Remove the jam from the manual feeder.

Clearing jams behind the photoconductor kit and toner cartridge

1 Push the release button, and then lower the front door.
2. Lift and pull the unit containing the photoconductor kit and the toner cartridge out of the printer. Set the unit aside on a flat, clean surface.

Warning—Potential Damage: Do not touch the photoconductor on the underside of the photoconductor kit. Use the cartridge handle whenever you are holding the cartridge.

CAUTION—HOT SURFACE: The fuser and the inside of the printer near the fuser may be hot. To reduce the risk of injury from a hot component, allow the surface to cool before removing paper from this area.

3. Remove the jammed paper.

Note: If the paper is not easy to remove, then open the rear door to remove the paper.

4. Align and reinstall the unit.
5. Close the front door.
6. Press [ ] to continue printing.

Clearing jams from the standard exit bin

A duplex print job was sent to the printer using a paper size not supported for duplex printing. A sheet is jammed in the standard exit bin.

To remove the jam, gently pull the sheet straight out of the standard exit bin.

Clearing jams from Tray 1

To see whether paper is jammed in or behind Tray 1, the standard tray:
1. Remove Tray 1.
2. Remove the jammed paper.

3. If necessary, depress the lever to free the paper and remove the jam.

4. Insert the tray.

5. Press "" to continue printing.
Clearing jams from Tray 2

To see whether paper is jammed in or behind Tray 2:

1. Remove Tray 2.

2. Remove the jammed paper.
3. Insert the tray.

4. Press to continue printing.

**Clearing jams in the manual feeder**

Paper jammed in the manual feeder can usually be grasped and pulled straight out. If the jam cannot be removed this way, check for jammed paper behind the photoconductor kit and toner cartridge unit. For more information, see “Clearing jams behind the photoconductor kit and toner cartridge” on page 118.
Clearing jams behind the rear door

If the paper is exiting the printer, pull the paper out. If the paper is not exiting the printer:

1. Push the release button, and then lower the front door.
2. Pull open the rear door.

The paper may be jammed with one end caught in the exit bin.
3. Remove the jammed paper.

4. Close both the front and rear doors.

5. Press ▲ to continue printing.
BASIC PRINTER TROUBLESHOOTING PROCEDURES

- Solving basic printer problems
- Solving printing problems
- Solving option problems
- Solving paper feed problems
- Solving print quality problems
- Clearing jams
Troubleshooting

Solving basic printer problems
If there are basic printer problems, or the printer is unresponsive, make sure:
• The power cord is plugged into the printer and a properly grounded electrical outlet.
• The electrical outlet is not turned off by any switch or breaker.
• The Ground Fault Circuit Interrupter (GFCI) has not tripped.
• The printer is not plugged into any surge protectors, uninterrupted power supplies, or extension cords.
• Other electronic equipment plugged into the outlet is working.
• The printer is turned on. Check the printer power switch.
• The printer cable is securely attached to the printer and the host computer, print server, option, or other network device.
• All options are properly installed.
• The printer driver settings are correct.

Once you have checked each of these possibilities, turn the printer off, wait for about 10 seconds, and then turn the printer back on. This often fixes the problem.

Solving printing problems

Jobs do not print
These are possible solutions. Try one or more of the following:

MAKE SURE THE PRINTER IS READY TO PRINT
• Make sure the \c light is on before sending a job to print.

CHECK TO SEE IF THE STANDARD EXIT BIN IS FULL
• Remove the stack of paper from the standard exit bin.

CHECK TO SEE IF THE TRAY IS EMPTY
• Load paper in the tray.

MAKE SURE THE CORRECT PRINTER SOFTWARE IS INSTALLED
Verify that you installed the correct printer software for your printer model.

Click Install printer and software on the Software and Documentation CD to check which software is installed.
Click Install printer and software on the Software and Documentation CD to check which software is installed.

Make sure the model number of the software matches the model number of your printer.

To verify that the printer software is the most current, check the Lexmark Web site at www.lexmark.com.
TROUBLESHOOTING GUIDE (BASIC PRINTER ISSUES)

MAKE SURE THE PRINTER IS CONNECTED TO THE NETWORK

Print a network setup page and check that the status shows Connected. If the status is Not Connected, check the
cable connections and that they are securely connected. For more information, visit the Lexmark website at www.lexmark.com.

MAKE SURE YOU ARE USING A RECOMMENDED USB, PARALLEL, OR ETHERNET CABLE

For more information, visit the Lexmark website at www.lexmark.com.

MAKE SURE PRINTER CABLES ARE SECURELY CONNECTED

Check the cable connections to the printer to make sure they are secure. For more information, see the setup
documentation that came with the printer.

Multiple-language PDFs do not print

The documents contain unavailable fonts.
1. Open the document you want to print in Adobe Acrobat.
2. Click the preview icon.
   The preview appears.
3. Select Print as Image.
4. Click OK.

Job takes longer than expected to print

The job is too complex.
Reduce the complexity of your print job by eliminating the number and size of fonts, the number and complexity of
images, and the number of pages in the job.

Job prints from the wrong tray or on the wrong paper

These are possible solutions. Try one or more of the following:

CHECK THE PAPER SIZE AND PAPER TYPE SETTINGS

From the Paper menu, make sure the Paper Size and Paper Type settings match the paper loaded in the trays. To
access the Paper menu, do one of the following:
• If the printer is on a network, access the Embedded Web Server by typing the IP address of the printer in the
  address bar of a Web browser. From the Settings tab, click Paper Menu.
• If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for
  Windows or Printer Settings Utility for Macintosh. One of these utilities installs with the printer software.
Check the Paper tab settings in your operating system

Open Print Properties in a Windows operating system or the print dialog in a Macintosh operating system. Make sure the layout, paper size, source, and paper type correspond with the paper loaded in the tray.

Incorrect characters print

Make sure the printer is not in Hex Trace mode. If the “Hex Trace mode” light sequence appears, you must exit Hex Trace mode before you can print your jobs. To exit Hex Trace mode, turn the printer off and back on.

Tray linking does not work

Make sure to do all of the following:

- Load both Tray 1 and Tray 2 with the same paper size and type.
- From Print Properties or the print dialog, change the Paper Source to Automatically select.

Large jobs do not collate

These are possible solutions. Try one or more of the following:

Check the Collate setting

From the Finishing menu, make sure Collate is On. To access the finishing menu, do one of the following:

- If the printer is on a network, access the Embedded Web Server by typing the printer IP address into the address field of your Web browser. From the Settings screen, click Finishing Menu.
- If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. One of these utilities installs with the printer software.

Check the Paper tab settings in your operating system

Open Print Properties in a Windows operating system or the print dialog in a Macintosh operating system. Make sure the “Page layout” setting for “Collate copies” is On, or the Collate check box is selected.

Note: Clearing the Collate check box overrides the setting in the Finishing menu.
Troubleshooting Guide (Basic Printer Issues)

Reduce the complexity of the print job
Reduce the complexity of the print job by eliminating the number and size of fonts, the number and complexity of images, and the number of pages in the job.

Make sure the printer has enough memory
Add printer memory.

Solving option problems
Option does not operate correctly or quits after it is installed
These are possible solutions. Try one or more of the following:

Reset the printer
Turn the printer off, wait for about 10 seconds, and then turn the printer on.

Check to see if the option is connected to the printer
1. Turn the printer off.
2. Unplug the printer.
3. Check the connection between the option and the printer.

Make sure the option is installed
Print a menu settings page and check to see if the option is listed in the installed options list. If the option is not listed, reinstall it.

Make sure the option is selected
From the program you are using, select the option. Mac OS X users should make sure the printer is set up in the Chooser.

Drawers
These are possible solutions. Try one or more of the following:

Make sure the paper is loaded correctly
1. Pull the tray completely out.
2. Check for paper jams or misfeeds.
3. Make sure the guides are aligned against the edge of the paper.
4. Insert the tray.
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TROUBLESHOOTING GUIDE (BASIC PRINTER ISSUES)

Reset the printer
Turn the printer off, wait about 10 seconds, and then turn the printer on.

Memory card
Make sure the memory card is securely connected to the printer system board.

Solving paper feed problems
Paper frequently jams
These are possible solutions. Try one or more of the following:

CHECK THE PAPER
Use recommended paper or specialty media. For more information, see “Paper and specialty media guide” on page 31.

FLEX, FAN, AND STRAIGHTEN THE PAPER BEFORE LOADING IT IN THE TRAY

MAKE SURE THERE IS NOT TOO MUCH PAPER IN THE TRAY
Make sure the stack of paper you load does not exceed the maximum stack height indicated in the tray.

CHECK THE GUIDES
Move the guides in the tray to the correct positions for the paper size loaded.

THE PAPER MAY HAVE ABSORBED MOISTURE DUE TO HIGH HUMIDITY
• Load paper from a fresh package.
• Store paper in its original wrapper until you use it.

Paper jam lights remain on after jam is cleared
The paper path is not clear. Clear jammed paper from the entire paper path, and then close any open doors.
Page that jammed does not reprint after the jam is cleared

Jam Recovery is set to Off. Do one of the following to set Jam Recovery to Auto or On:
• If the printer is on a network, access the embedded Web Server:
  1. Type the printer IP address into the address field of your Web browser.
     Note: If you do not know the IP address of the printer, print a network setup page and locate the IP address
     in the TCP/IP section.
  2. From the Settings tab, make sure Jam Recovery is set to Auto or On, and then click Submit.
• If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for
  Windows or Printer Settings for Macintosh. One of these utilities installs with the printer software. From the Setup
  menu, make sure Jam Recovery is set to Auto or On.

Solving print quality problems

The information in the following topics may help you solve print quality problems. If these suggestions still do not
correct the problem, call Customer Support. You may have a printer part that requires adjustment or replacement.

Isolating print quality problems

Print the print quality test pages to isolate print quality problems.

1. Turn the printer off, and then open the front door.
2. Press and hold ▶ until turning the printer on.
4. Close the front door. The light sequence that represents the Home menu appears.

5. Press and release ▶ until you see the light sequence for print quality test pages, as indicated on the printer
   settings configuration sheet.
6. Press and hold ▶ until all lights cycle.
After a few minutes, the print quality test pages print. The pages include:
- An information page containing information about the device, the cartridge, margin settings, and minimum stroke width, and a graph for evaluating the print quality
- Two pages for assessing how well the printer is capable of printing various types of graphics

7. Examine the pages to determine the quality of printing. If there are problems, see “Solving print quality problems” on page 131.
To return to the Home menu, press and hold \( 
\) until all the lights cycle. To exit the menus, turn the printer off.

Blank pages

Try one or more of the following:
- Remove and reinstall the toner cartridge.
- Remove and reinstall the photoconductor kit.

If the printer still prints blank pages, it may need to be serviced. For more information, contact Customer Support.

Characters have jagged or uneven edges

If you are using downloaded fonts, verify that the fonts are supported by the printer, the host computer, and the software program.

Clipped images

These are possible solutions. Try one or more of the following:

CHECK THE PAPER GUIDES
Move the guides in the tray to the correct positions for the paper size loaded.

CHECK THE PAPER SIZE SETTING
Make sure the Paper Size setting matches the paper loaded in the tray.
**New Jersey Operators Instruction Manual**

**Troubleshooting Guide (Basic Printer Issues)**

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**Gray background**

From the Quality menu, select a reduced Toner Darkness setting before sending the job to print. To access the Quality menu, do one of the following:

- If the printer is on a network, access the Embedded Web Server by typing the printer IP address into the address field of your Web browser. From the Settings tab, click Print Settings.
- If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. One of these utilities installs with the printer software.

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**Ghost Images**

These are possible solutions. Try one or more of the following:

**The Photoconductor Kit May Be Defective**

Replace the photoconductor kit.

**Check the Paper Size and Paper Type Settings**

From the Paper menu, change the paper size and paper type settings to match the paper loaded in the tray. To access the Paper menu, do one of the following:

- If the printer is on a network, access the Embedded Web Server by typing the printer IP address into the address field of your Web browser. From the Settings tab, click Paper Menu.
- If the printer is connected to a computer by a USB or parallel cable, open the Local Printer Settings Utility for Windows or Printer Settings for Macintosh. One of these utilities installs with the printer software.
**Incorrect margins**

**CHECK THE PAPER GUIDES**
Move the guides in the tray to the correct positions for the paper size loaded.

**CHECK THE PAPER SIZE setting**
Make sure the Paper Size setting matches the paper loaded in the tray.

**CHECK THE PAGE SIZE setting**
Before sending the job to print, specify the correct page size in Print Properties or the software program.

**Paper curl**
These are possible solutions. Try one or more of the following:

**CHECK THE PAPER TYPE setting**
Make sure the Paper Type setting matches the paper loaded in the tray.

**THE PAPER MAY HAVE ABSORBED MOISTURE DUE TO HIGH HUMIDITY**
Try one or more of the following:
* Load paper from a fresh package.
* Store paper in its original wrapper until you use it.

**Print is too dark**

These are possible solutions. Try one or more of the following:
CHECK THE DARKNESS, BRIGHTNESS, AND CONTRAST SETTINGS
The Toner Darkness setting is too dark, the Brightness setting is too dark, or the Contrast setting is too high.
• From Print Properties, change these settings.
  Note: This solution applies to Windows users only.
• From the Quality menu, change these settings.

THE PAPER MAY HAVE ABSORBED MOISTURE DUE TO HUMIDITY
• Load paper from a fresh package.
• Store paper in its original wrapper until you use it.

CHECK THE PAPER
Avoid textured paper with rough finishes.

CHECK THE PAPER TYPE SETTING
Make sure the Paper Type setting matches the paper loaded in the tray.

THE TONER CARTRIDGE MAY BE DEFECTIVE
Replace the toner cartridge.

Print is too light

These are possible solutions. Try one or more of the following:

CHECK THE DARKNESS, BRIGHTNESS, AND CONTRAST SETTINGS
The Toner Darkness setting is too light, the Brightness setting is too light, or the Contrast setting is too low.
• From Print Properties, change these settings.
  Note: This solution applies to Windows users only.
• From the Quality menu, change these settings.

THE PAPER MAY HAVE ABSORBED MOISTURE DUE TO HUMIDITY
• Load paper from a fresh package.
• Store paper in its original wrapper until you use it.
CHECK THE PAPER
Avoid textured paper with rough finishes.

CHECK THE PAPER TYPE setting
Make sure the Paper Type setting matches the paper loaded in the tray.

THE TONER MAY BE LOW
When Toner is low appears on the virtual display, or when the print becomes faded, order a new toner cartridge.

THE TONER CARTRIDGE MAY BE DEFECTIVE
Replace the toner cartridge.

Skewed print

CHECK THE PAPER GUIDES
Move the guides in the tray to the correct positions for the paper size loaded.

CHECK THE PAPER
Make sure you are using paper that meets the printer specifications.

TONER FOG OR BACKGROUND SHADING APPEARS ON THE PAGE
These are possible solutions. Try one or more of the following:

THE TONER CARTRIDGE MAY BE DEFECTIVE
Replace the toner cartridge.

THERE IS TONER IN THE PAPER PATH
Contact Customer Support.

TONER RUBS OFF

These are possible solutions. Try one or more of the following:
CHECK THE PAPER TYPE settings
Make sure the Paper Type setting matches the paper loaded in the tray.

CHECK THE PAPER TEXTURE setting
Make sure the Paper Texture setting matches the paper loaded in the tray.

Toner specks

ABC
DEF

These are possible solutions. Try one or more of the following:

THE TONER CARTRIDGE MAY BE DEFECTIVE
Replace the toner cartridge.

THERE IS TONER IN THE PAPER PATH
Contact Customer Support.

TRANSPARENCY print quality is poor

CHECK THE TRANSPARENCIES
Use only transparencies recommended by the printer manufacturer.

CHECK THE PAPER TYPE setting
Load transparencies, and make sure the Paper Type setting is set to Transparency.

Streaked horizontal lines

These are possible solutions. Try one or more of the following:
THE TONER MAY SMEAR WHEN PAPER IS FED FROM A SPECIFIC SOURCE
From Print Properties, the print dialog, or the printer control panel, select another tray or feeder to feed the paper for the job.

THE TONER CARTRIDGE MAY BE DEFECTIVE
Replace the toner cartridge.

MAKE SURE THE PAPER PATH IS CLEAR
Paper could be caught between the photoconductor kit and the fuser. Check the paper path around the fuser area.

CAUTION—HOT SURFACE: The area of the printer near the fuser is hot. Allow the area to cool before removing paper from this area.

Make sure any paper you see.

THERE MAY BE EXCESS TONER IN THE PAPER PATH
Contact Customer Support.

Streaked vertical lines

These are possible solutions. Try one or more of the following:

THE TONER MAY SMEAR WHEN PAPER IS FED FROM A SPECIFIC SOURCE
From Print Properties, the print dialog, or the printer control panel, select another tray or feeder to feed paper for the job.

THE TONER CARTRIDGE IS DEFECTIVE
Replace the toner cartridge.

MAKE SURE THE PAPER PATH IS CLEAR
Paper could be caught between the photoconductor kit and the fuser. Check the paper path around the fuser area.

Warning—Potential Damage: Do not touch the photoconductor on the underside of the photoconductor kit. Use the cartridge handle whenever you are holding the cartridge.

CAUTION—HOT SURFACE: The fuser and the inside of the printer near the fuser may be hot. To reduce the risk of injury from a hot component, allow the surface to cool before removing paper from this area.
Clear any paper you see.

**THERE MAY BE EXCESS TONER IN THE PAPER PATH**
Contact Customer Support.

**Solid black or white streaks appear on transparencies or paper**

These are possible solutions. Try one or more of the following:

**MAKE SURE THE FILL PATTERN IS CORRECT**
If the fill pattern is incorrect, choose a different fill pattern from your software program.

**CHECK THE PAPER TYPE**
- Try a different type of paper.
- For transparencies, use only ones recommended by the printer manufacturer.
- Make sure the Paper Type setting matches what is loaded in the tray or feeder.
- Make sure the Paper Texture setting is correct for the type of paper or specialty media loaded in the tray or feeder.

**MAKE SURE THE TONER IS DISTRIBUTED EVENLY IN THE TONER CARTRIDGE**
Remove the toner cartridge and shake it from side to side to redistribute the toner to extend the life of the cartridge, and then reinstall it.

**THE TONER CARTRIDGE MAY BE DEFECTIVE OR LOW ON TONER**
Replace the used toner cartridge with a new one.

**Contacting Customer Support**
When you call Customer Support, describe the problem you are experiencing, the message on the display, and the troubleshooting steps you have already taken to find a solution.

You need to know your printer model type and serial number. For more information, see the label on the inside top front cover of the printer. The serial number is also listed on the menu settings page.

In the U.S. or Canada, call (1-800-539-6275). For other countries/regions, visit the Lexmark Web site at www.lexmark.com.
# Clearing Jams

**Avoiding Jams**

The following hints can help you avoid jams:

- Use only recommended paper or specialty media. For more information, see "Paper and specialty media guide" on page 51.
- Do not load too much paper. Make sure the stack height does not exceed the indicated maximum height.
- Do not load wrinkled, creased, damp, or curled paper.
- Flex, fan, and straighten paper before loading it.

- Do not use paper that has been cut or trimmed by hand.
- Do not mix paper sizes, weights, or types in the same stack.
- Store the paper in an appropriate environment.
- Do not remove trays while the printer is printing. Wait for the light to come on before removing a tray. The light sequence for loading paper also signals that the tray may be removed.

![Clearing Jams Diagram](image)

- Load paper
- On
- Do not load the manual feeder while the printer is printing. Wait for the light to come on.
- Push all trays firmly after loading paper.
- Make sure the guides in the trays are properly positioned, and are not pressing too tightly against the paper.
- Make sure all paper sizes and paper types are set correctly.
- Make sure all printer cables are attached correctly. For more information, see the setup documentation.

*(Troubleshooting procedures courtesy of Lexmark)*
TABLE OF CONTENTS

OBDII Interface Module
Troubleshooting procedures
OBDII INTERFACE MODULE TROUBLESHOOTING PROCEDURES:

**FIGURE 11-1: OBDII SCAN IN PROGRESS SCREEN**

1. If you receive a connection error when testing a vehicle in the inspection menu please do the following:
   a. Verify that Data Link Connector (DLC) cable is not damaged. If it is please call the help desk to an appointment for a replacement. If the cable does not appear to be damaged proceed to step b.
b. Please recycle the power to the OBDII interface module by unplugging and the plugging in the power supply into the power strip. Then try to attempt OBDII communications again with the vehicle. If it still does communicate call the help desk to schedule an appointment for service. It is possible you have a defective OBDII interface module.
Chapter 12

Equipment Maintenance
CHAPTER 12: EQUIPMENT MAINTENANCE

The following maintenance must be performed by the PIF:

- Check Low and High Cal gas bottles and ensure that the values are within allowable tolerance and the date has not expired
- Check cal gas bottle pressure if available
- Check the Zero bottle if available
- Check keyboard to ensure that all keys are functioning
- Check time and date
- Change Primary, and all In-lines filters if sample system is available
- Replace or clean any needed tubing
- Perform diagnostic checks on sample system
- Check printer drum and printer for cleanliness; clean or replace as needed
- Perform printer self-cleaning operation, if supported
- Ensure that the gas cap adapters are in good working order
- Perform Pass/Fail calibration on the Waekon tester
- Perform a performance check for the gas cap tester
- Ensure that the proper station information is printing out on the VIR

All PIFs will be responsible for proper routine maintenance of the test system. The specific routine maintenance will be based on the configuration purchased. For OBDII only systems, there is very little routine maintenance other than adding paper and toner.
to the printer and a periodic calibration of the gas cap tester. However, stations that purchase the gas analytical system will need to follow routine maintenance schedule.

The schedule will include, but is not limited to:

<table>
<thead>
<tr>
<th>Routine Maintenance</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowl Filters</td>
<td>Monthly (as needed)</td>
</tr>
<tr>
<td>Calibration Bottles</td>
<td>Change when empty</td>
</tr>
<tr>
<td>Hoses/Probe Tips (including diesel</td>
<td>Replace when needed</td>
</tr>
<tr>
<td>cables/hoses)</td>
<td></td>
</tr>
<tr>
<td>Toner Cartridge</td>
<td>Replace when needed</td>
</tr>
<tr>
<td>Diesel Optics</td>
<td>Clean as required</td>
</tr>
</tbody>
</table>
CHAPTER 13: MOBILE WORKSTATION

Handheld Use in the Mobile Workstation

There are four main areas where the handheld can be used in the NJ Workstation:

1. Scanning barcodes,
2. Gas analyzer emissions tests,
3. MIL tests, and
4. OBD emissions tests.

Handheld Prompt for Use: When the workstation software displays a picture in picture type screen in the upper left hand corner of the workstation screen, the handheld may be used, see Figure 13-1.

Figure 13-1: Picture and Picture Prompt Use Handheld
Start Remote Use:

Click on the “Start Remote” icon on the main menu of the handheld to start using the handheld device. The handheld’s screen will then be updated with the picture in picture screen on the workstation itself and key presses on the handheld such as escape, enter, Y and N can be used to interact with the workstation as applicable.

When the process where the handheld may be used is over, the picture in picture screen will close and the handheld should be left with the message “Tap to exit”. You can then tap on the screen of the handheld to be returned to the main menu on the handheld.
BARCODE SCANNING - HANDHELD

Screens like the one below will appear anytime the workstation prompts for scanning a barcode with the handheld. The handheld’s green SCAN button can then be pressed to scan a barcode from the handheld into the workstation.

![Figure 13-2: Scan Vehicle VIN Barcode Message (Prompt to use handheld)](image)

**Figure 13-2: Scan Vehicle VIN Barcode Message (Prompt to use Handheld)**
Gas Analyzer Emissions Tests - Handheld

During an emissions test that involves the gas analyzer, the RPM tracker will be available on the handheld for viewing inside the vehicle with the handheld. The enter and arrow keys at this point can be used on the handheld to click buttons on the screen as needed.

Figure 13-3: Getting RPM Values (Prompt to Use Handheld)
At the end of a gas analyzer emissions test, the handheld will display the test complete text the same as appears on the workstation screen.

**Figure 13-4: Test Complete (Handheld Message)**

The two speed idle test is complete.

Turn the engine off.

Remove the exhaust probe and RPM probe.
MIL TEST - HANDHELD

The MIL test will display the prompts to perform the check on the handheld and will allow the responses to be entered via the keys on the handheld.

Turn the ignition key to the on position but do not start the engine. MIL illumination may be continuous or may stay on for a few seconds.

Is the Malfunction Indicator Light (MIL) illuminated?

**Figure 13-5: Key On Engine Off (KOEO - Handheld Message)**
Key On Engine Running (KOER)

Start the vehicle's engine.

Is the Malfunction Indicator Lamp (MIL) on or flashing?

Press ‘Y’ for yes or ‘N’ for no.

**FIGURE 13-6: KEY ON ENGINE RUNNING (KOER - HANDHELD MESSAGE)**

Start the vehicle's engine...

...and allow the vehicle to idle. MIL illumination may be continuous or may stay on for a few seconds.

Is the Malfunction Indicator Light (MIL) illuminated?

**FIGURE 13-6: KEY ON ENGINE RUNNING (KOER - HANDHELD MESSAGE)**
OBD Test - Handheld

The handheld will display notifications at the beginning and end of the OBD test so the inspector may stay in the vehicle the whole time after a successful connection is made until the end of the OBD test.

Figure 13-7: Connect to DLC (Handheld Message)

1. Turn off the vehicle before connecting the Diagnostic Link Connector (DLC).
2. Locate the vehicle’s OBDII DLC and attach the workstation OBDII cable.
3. Turn on the vehicle’s engine.

Could the DLC be located and a connection made?

Press F1 for help locating the vehicle’s DLC.

Could the DLC be located and a connection made?

Yes  No
Turn off the vehicle and disconnect the OBD cable from vehicle's DLC (Diagnostic Link Connector).

Figure 13-8: Emissions Test Complete (Handheld Message)
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