

Name _____

Valvoline Instant Oil Change®



SUPER-PRO® 10 TRAINING SYSTEM

Technician Training Program

Technician Study Guide

August, 2008

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Progress Chart

This chart outlines the milestones you will complete in this manual. It will also serve as a roadmap of your training as a technician. To keep track of your progress through the manual by writing the date, your initials, and score (if applicable) after each part as you complete it. Your Trainer must also initial it. When you have successfully completed the manual, both you and the Service Center Manager will sign the chart below and your Service Center Manager will determine if you should be recommended for Certification. *ODC stands for Observe/Do/Certify Checklists which should be scored as P (pass) or F (fail).*  Indicates on-line course.

Topic	Date	Score	Your Initials	Trainer's Initials
Super Start Orientation Class				
• Top-Side Call Outs		N/A		
Meet With Your Trainer #1		N/A		
 <i>Super Start Test</i>				
 <i>Operations Manual Test</i>				
Part 1 – Guest Service				
• Guest Service ODC				
 <i>Guest Service Test</i>				
Part 2 – Top-Side Service				
• Top-Side Service ODC				
• Meet With Your Trainer #2		N/A		
 <i>Top-Side Test</i>				
Part 3 – Bottom-Side Service				
• Bottom-Side Service ODC				
 <i>Bottom-Side Test</i>				
• Meet With Your Trainer #3		N/A		
Part 4 – Introduction to Point-of-Sale System				
• Introduction to POS ODC				
Part 5 – VIOC Product Information				
 <i>Lubrication Basics</i>				
 <i>Developing Motor Oil</i>				
 <i>Product Information Test</i>				

Topic	Date	Score	Your Initials	Trainer's Initials
• Meet With Your Trainer #4		N/A		
Part 6 – Additional Services				
• Additional Services ODC				
 <i>Additional Services Test</i>				
• Meet With Your Trainer #5		N/A		
Part 7 – Automotive Systems				
 <i>Fundamentals of Mechanics – The Combustion Engine</i>				
 <i>Automotive Systems</i>				
Part 8 – Car Talk				
• Car Talk Questions		N/A		
• Meet With Your Trainer #6		N/A		
Part 9 – Using Service Center Reference Manuals				
• Reference Manual Exercise		N/A		
 <i>Technician Comprehensive Test</i>				
• Meet With Your Trainer #7		N/A		

Employee's Signature

Service Center Manager's Signature

Date Completed

Part 2: Top-Side Service Procedures

1. Fast and Friendly Greeting
2. Guide the guest into the bay
3. Check transmission fluid level
4. Remove air filter
5. Test battery
6. Inspect serpentine belt
7. Check the wiper blades and tire pressure
8. Check brake fluid level
9. Check power steering fluid level
10. Fill washer fluid level
11. Check the coolant level, and test the antifreeze
12. Install oil
13. Perform second-party check for bottom-side technician
14. Start vehicle and check the oil pressure
15. Conduct second check
16. Maintain topside service area

As you study the topside procedures, be sure to note any questions that you may have on the Meet with Your Trainer 1 page and ask them during your meeting with the Trainer at the end of this chapter.



Bay__ is used as an example throughout this manual; you would call out “Bay 1,” “Bay 2,” “Bay 3,” or “Bay 4,” depending on the bay you’re working in at the time.



- **If at any time service cannot be completed due to a service failure or interrupted service, top-side and bottom-side technicians must immediately go to second checks and close the pit covers.**



Tasks 1 & 2: Fast and Friendly Greeting & Guiding the Guest into the Bay

First impressions are important – and you have only one try at each of them. Be happy to see the guest.

Our goal is to acknowledge all guests within **20 seconds** of their arrival. We want them to know immediately that we are friendly, efficient and approachable. The first two tasks for top-side procedures are 1) Fast and Friendly Greeting and 2) Guide the Guest into the Bay. How busy your service center is dictates the order in which these two tasks are completed. Essentially there are two scenarios:

Guest Arrives – Empty Bay	Guest Arrives – No Bay Available
<ul style="list-style-type: none"> • Acknowledge • Guide into the bay • Greet the guest with the standard greeting 	<ul style="list-style-type: none"> • Greet the guest with the standard greeting • Guide into the bay when available

Guiding the Guest into the Bay

1. Ensure the bay door is open enough to clear the top of the vehicle.
2. Fill your tire rotation lanes first to accommodate more opportunity for this service.
3. **CALL OUT:** “Clear for guest, Bay ___!”
4. Wait for response from bottom side.
5. In a friendly manner, use clear hand signals (bend both arms at the elbow) to guide the vehicle into the bay and over the floor opening.
 - a. **Smile and look the guest in the eyes.**
 - b. Once the vehicle is halfway over the floor opening, move to the driver’s side of the vehicle. Stand outside the yellow safety lines.
 - c. Make eye contact and smile.
 - d. Acknowledge the guest in a positive manner once in position over the bay (give them a thumbs up, “perfect”, “thank you”, “nice job”).



- **Floors can be slick. DO NOT run.**
- **Always be aware of the floor openings. Use care around them, and warn guests about them if they leave their vehicles. Pit covers must be closed after each oil change is complete, and whenever there isn’t a car in the bay.**
- **Immediately clean up any spills — oil, antifreeze, grease, etc.**
- **If a guest is smoking, let them know that this is a NO Smoking facility within 25 feet of the building.**

Greeting the Guest

How you greet the guest depends on where you greet the guest – in the bay or on the lot. Below is a side-by-side view of both greetings. Pay close attention to the spotlight behaviors. Typically the guest is greeted by the CSR but there may be times where you, as a technician, may need to assist with tasks such as guiding the guest into the bay, light checks or even entering guest information into the POS. For this reason the entire greeting is outlined for your reference.

<u>Greet in the Bay</u>	<u>Greet on the Lot</u>
<p>If a bay is available when the guest drives onto the lot, immediately guide the guest into the bay.</p> <ol style="list-style-type: none"> 1. Ensure the bay door is open enough to clear the top of the vehicle and bring them in on the tire rotation bay, if available. 2. CALL OUT: “Clear for guest, Bay __!” 3. Wait for a response from bottom side. 4. In a friendly manner, use clear hand signals (both arms bending at the elbow) to guide the vehicle into the bay and over the floor opening. 5. Step to the outside corner of the yellow safety line once the front of the vehicle is halfway over the floor opening. 6. Acknowledge the guest in a positive manner once in position over the bay (thumbs up, “perfect”, “thank you”, “nice job.”) 	<p>All bays are full and a guest drives on the lot. (Objective is to provide a warm welcome within 20 seconds to prevent drive-offs.)</p> <ol style="list-style-type: none"> 1. Within 20 seconds, pick-up a brochure and as you are approaching the vehicle smile and look the guest in the eyes. <div data-bbox="868 856 927 953" style="display: inline-block; vertical-align: middle;"> </div> <p>If there is a wait on the lot, it is “All Hands on Deck”. All guests must be greeted within 20 seconds. If the CSR position is busy with another vehicle, any position can perform this function. The goal of <u>all</u> store employees is to ensure the guest is greeted promptly.</p> 2. Welcome the guest to VIOC by introducing and offering assistance: Say: “Hello, my name is Andy. How may I help you today?” 3. Provide the guest a brochure. Say: “Here is a brochure about us and our services. Please notice that our oil change service includes a full service oil change and safety inspection. Here is our VIOC promise and our goal to earn your return by providing the best possible service. And, on the inside you will see our Valvoline oils and some of the packages we offer.” Point out these items in the brochure as you state them. 4. SAY: “We have __ cars in
<hr/> <p>Guest Experience Moment - <i>You will guide guests in many times each day, but it is important to remember that many of our guests find it scary to drive over an open pit. You should be pleasant and affirming to ease their discomfort.</i></p> <hr/> <ol style="list-style-type: none"> 7. Welcome the guest to VIOC by introducing yourself and offering assistance. SAY: “Hello, my name is Sally, 	

<u>Greet in the Bay</u>	<u>Greet on the Lot</u>
<p>how may I help you today?"</p> <p>8. SAY: "Could you please leave your car running and pop the hood so we can get started on your (name service) right away to have you out of here as quickly as possible!"</p> <p>9. Topside technician should have checked transmission at this time.</p> <p>SAY: "Jim has checked your transmission and the level is (full/low/sealed/manual). Now we're going to start our safety inspection with your lights."</p> <p>10. Guide the guest through a vehicle light inspection and check: (Use "Please" and "Thank you" after each check.)</p> <ol style="list-style-type: none"> a. Headlights b. High Beams c. Turn Signals d. Marker lights e. License plate lights f. Brake lights <p>Top Side and Guest Service Role to perform vehicle light check. (If your service center is equipped with mirrors, you will be able to check all the lights by yourself.)</p> <p>11. CALL OUT: "Lights checked, Bay__!"</p> <p>12. SAY: "May I open your door to scan your VIN and check your tire pressure?"</p> <p>Obtain tire pressure and scan VIN. Inform technician of tire pressure.</p> <p>13. Say: "At this time, I need to get some information from you. May I have the mileage on your vehicle?"</p> <p>14. Say: "Great, could you please</p>	<p>front of you. One of them is just finishing up, so it shouldn't be long before we get you in. Thank you for waiting."</p> <hr/> <p>Guest Experience Moment -</p> <p><i>It is important to provide the guest information to assist in managing their wait time. Research has shown that overall satisfaction is closely tied to speed of service and how their wait time is managed. Keep the guest updated and stay in contact with them.</i></p> <hr/> <p>5. Ensure the bay door is open enough to clear the top of the vehicle and bring them in on the tire rotation bay, if available.</p> <p>6. Smile and look the guest in the eyes.</p> <p>7. CALL OUT: "Clear for Guest, Bay__!"</p> <p>8. Wait for a response from bottom side.</p> <p>9. In a friendly manner, use clear hand signals (both arms bending at the elbow) to guide the vehicle into the bay and over the floor opening.</p> <p>10. Step to the outside corner of the yellow safety line once the front of the vehicle is half way over the floor opening.</p> <p>11. Acknowledge the guest in a positive manner once in position over the bay (thumbs up, "perfect", "thank you", "nice job.")</p> <hr/> <p>Guest Experience Moment -</p> <p><i>You will guide guests in many times each day, but it is important to remember that many of our guests find it scary to drive over an open pit. You should be pleasant and affirming to ease their discomfort.</i></p> <hr/>

<u>Greet in the Bay</u>	<u>Greet on the Lot</u>
<p>them on the dash for safety purposes?”</p> <p>15. Verify the oil filter on the Check-Chart Screen.</p> <p>CALL OUT: “(oil filter #), Bay__!”</p> <p>16. Verify/Obtain the guest’s name and address information.</p> <ul style="list-style-type: none"> • If new guest: ask him or her name and address information and type directly into POS. • If existing guest: verify that name, address and phone number is accurate. • If fleet guest: also obtain fleet card or booklet. <p>17. SAY: “You’ll hear us communicating back and forth. We are doing this for speed and safety.”</p> <p>18. Provide the guest a brochure.</p> <p>Say: “Here is a brochure about us and our services. Please notice that our oil change service includes a full service oil change and safety inspection. Here is our VIOC promise and our goal to earn your return by providing the best possible service. And, on the inside you will see our Valvoline oils and some of the packages we offer.”</p> <p>Point out these items in the brochure as you state them.</p> <p>19. SAY: “If you have any questions, again my name is Sally.”</p>	<p>12. SAY: “Could you please leave your car running and pop the hood so we can get started on your (name service) right away to have you out of here as quickly as possible!”</p> <p>13. Topside technician should have checked transmission at this time.</p> <p>SAY: “Jim has checked your transmission and the level is (full/low/sealed/manual). Now we’re going to start our safety inspection with your lights.”</p> <p>14. Guide the guest through a vehicle light inspection and check: (Use “Please” and “Thank you” after each check.)</p> <ol style="list-style-type: none"> a. Headlights b. High Beams c. Turn Signals d. Marker lights e. License plate lights f. Brake lights <p>Top Side and Guest Service Role to perform vehicle light check. (If your service center is equipped with mirrors, you will be able to check all the lights by yourself.)</p> <p>15. CALL OUT: “Lights checked, Bay__!”</p> <p>16. SAY: “May I open your door to scan your VIN and check your tire pressure?”</p> <p>Obtain tire pressure and scan VIN. Inform technician of tire pressure.</p> <p>17. Say: “At this time, I need to get some information from you. May I have the mileage on your vehicle?”</p>

<u>Greet in the Bay</u>	<u>Greet on the Lot</u>
	18. Say: “Great, could you please remove your keys and place them on the dash for safety purposes?” 19. Verify the oil filter on the Chek-Chart Screen.

The remaining procedures pick up from the point that the guest is in the bay.

1. The Top Side and Customer Service Roles perform the light check.
 - Headlights
 - High beams
 - Check park lights
 - Hazard lights – Allows you to check all signal lights without the engine running.
 - Brake lights – Ask guest to put their foot on the brake pedal to check brake lights; check high mount brake light.
 - License plate lights

Guest Experience Moment -

Help the guest feel relaxed by using a pleasant tone of voice during the light check. Be patient and positive as you guide the guest through. If the guest is not present or does not wish to assist, the Customer Service Role will perform the Light Check from inside the vehicle.

SAY: “I will be guiding you through an initial check of your lights.”

CALL OUT: “Lights Checked, Bay__!”

2. Inform top-side technician of recommended tire pressure.

SAY: “(John)” will be inspecting your wipers and tire pressure, (Ford) recommends 35 pounds for tires. Is that ok?”

Entering Vehicle Information into POS

We will first focus on the new guest who is not part of a fleet.

While greeting the guest and finding out why they came in to see us today, we enter the guest’s vehicle in the POS system. There are two ways to do this:

1. Use a scanner or PDA equipped with a scanner
2. Input the information manually into the POS system



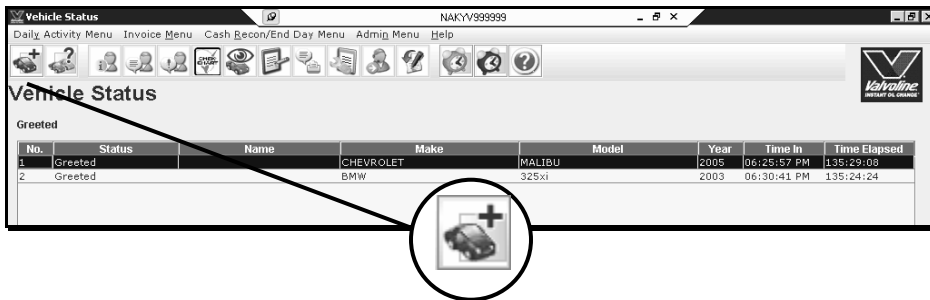
Using Scanner Technology

If your service center uses a scanner, you will point the reader section of the scanner toward the car's VIN number, which will be located either just inside the driver's side windshield, or on the driver's inside door panel. The scanner will read the VIN and enter the vehicle in the **Greeted** area of the **Vehicle Status** screen. When this is the case, you will continue to the section titled Entering Guest Information. However, there will be times when you need to enter the information by hand.



Using the Add Vehicle Button

If you have trouble scanning the VIN, or if you need to input a vehicle manually for any other reason, click the **Add Vehicle** button.



You can also press **Alt + A** to access the **Add Vehicle** window.



Entering Vehicle Information Manually

1. Click the **Add Vehicle** button.
2. Enter the Vehicle Identification Number (**VIN**).

Add Vehicle

VIN

Alternate VIN

Year

Make

Model

Engine

3. Click the **Continue** button.

The vehicle appears in the **Greeted** area of the **Vehicle Status** screen.

Vehicle Status

Greeted

No.	Status	Name	Make	Model	Year	Time In	Time Elapsed
1	Greeted	George Bush	HONDA	ACCORD	1999	09:14:07 AM	26:03:53
2	Greeted		VOLVO	V70	2003	11:15:47 AM	00:02:13

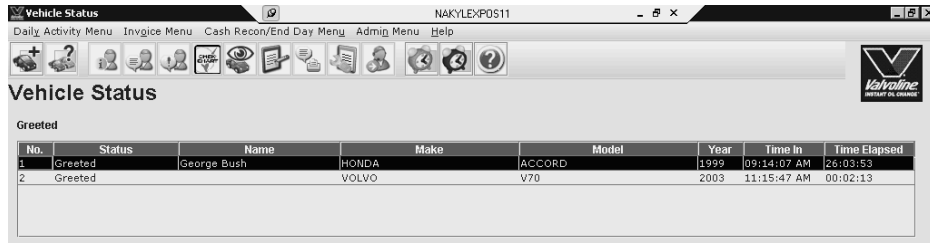


If you do not have access to the VIN, you may assign a new PMT number and enter it in the **Alternate VIN** box.

Entering Guest's Information into POS

Most of the guests we encounter throughout the day are considered **'regular'** customers – meaning they have been to VIOC before with the vehicle they are driving. To enter their information in the POS simply follow the steps below:

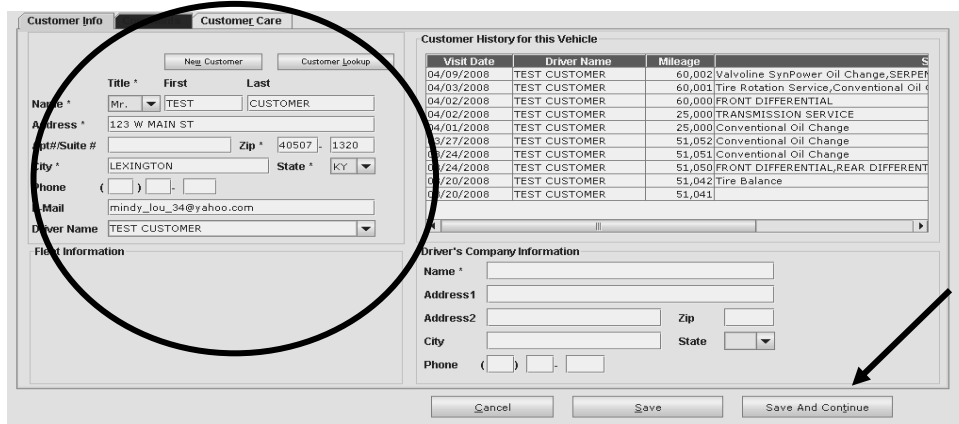
1. From the **Greeted** area double-click the vehicle being serviced.



2. Verify the vehicle **License Plate** and enter the **Mileage**.

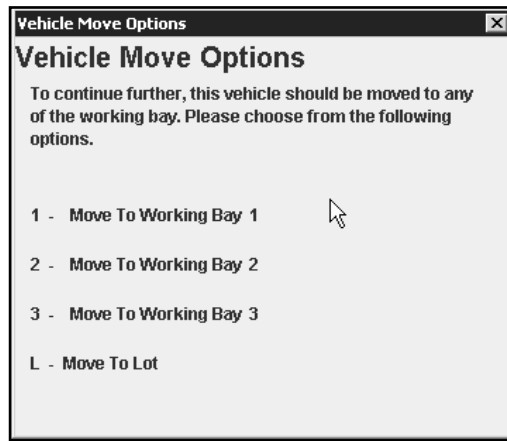


3. Verify the customer's information and update if necessary, then click the **Save and Continue** button to continue with invoicing.



SAY: "Mr. Smith, I've captured your address information. I have you at 3499 Blazer Parkway in Lexington, KY 40509 and your phone as (859)357-1000. Is everything correct?"

4. Choose a bay or lot by selecting the corresponding key on the keyboard (1, 2, 3, 4, or L).



5. If the guest has requested an oil change, verify the oil filter number on the Chek-Chart Screen.
6. Tell the bottom-side Technician what the correct filter number is. If the Chek-Chart screen does not have the filter information available:
 - a. Check the Valvoline filter guide
 - b. Call the filter hotline: 1-800-882-0890

CALL OUT: “(Oil Filter #), Bay___!”
7. Listen for the bottom-side technician’s response.



Verify who the individual driving the vehicle is on each visit. The procedures for entering a driver and vehicle into the POS system depends on whether they are a new or existing customer driving a new or existing vehicle.

See below for the proper procedures for the different types of customers and vehicles.



- **If guests are going to the waiting area, caution them about the floor openings and be sure they are escorted through the service area.**
- **DO NOT service any vehicle with a key in the ignition.**

Other Types of Customers

There are four other types of customers you will encounter while at VI OC.

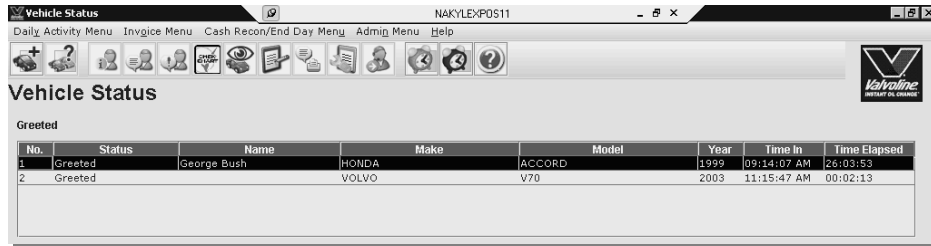
- The **new** customer with a **new** vehicle
- The **new** customer with an **existing** vehicle
- The **existing** customer with an **existing** vehicle
- The **existing** customer with a **new vehicle**.

Each type of customer has a slightly different method for entering their information in the POS. Follow the procedures outlined for each type of customer.

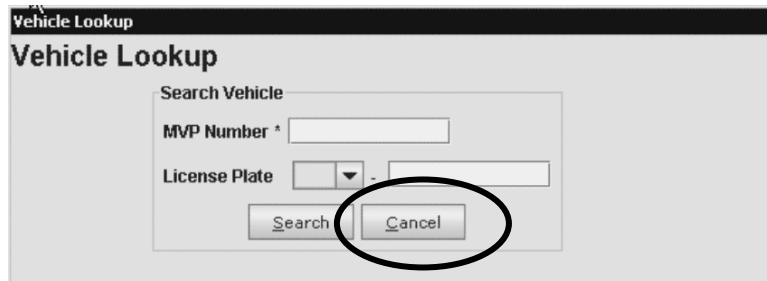
New Customer – New Vehicle

This type of guest is a **new** customer (they have never been to a VIOC) driving a **new** vehicle (the vehicle has never been serviced at *any* VIOC).

1. From the **Greeted** area double-click the vehicle being serviced.



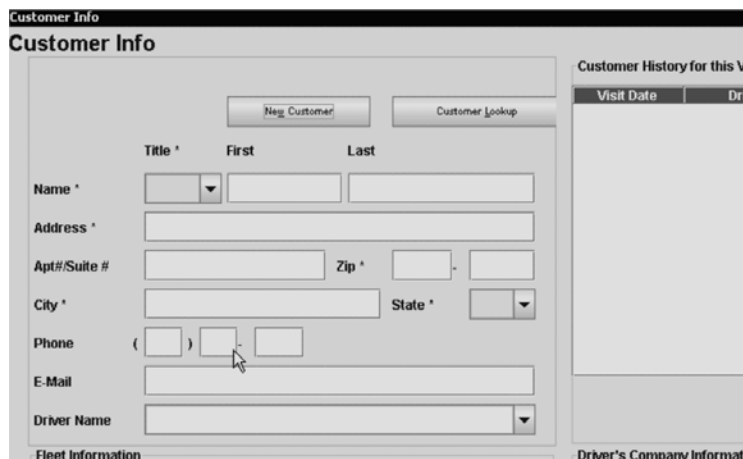
2. Click **Cancel** to move past the **Vehicle Lookup** window.



3. Enter the vehicle **License Plate** and **Mileage**.



4. Enter the **Title, First and Last Name, Address, Zip Code, Phone Number, E-Mail Address, and Driver's Name**.



- Verify the customer's information and then click the **Save and Continue** button to continue with invoicing.

Customer Info Customer Care

Neg. Customer Customer Lookup

Name * Title * First Last
Mr. TEST CUSTOMER

Address * 123 W MAIN ST

City #/Suite # Zip * 40507 1320

City * LEXINGTON State * KY

Phone () - -

E-Mail mindy_lou_34@yahoo.com

Driver Name TEST CUSTOMER

Planet Information

Customer History for this Vehicle

Visit Date	Driver Name	Mileage	
04/09/2008	TEST CUSTOMER	60,002	Valvoline SynPower Oil Change,SERPER
04/03/2008	TEST CUSTOMER	60,001	Tire Rotation Service,Conventional Oil C
04/02/2008	TEST CUSTOMER	60,000	FRONT DIFFERENTIAL
04/02/2008	TEST CUSTOMER	25,000	TRANSMISSION SERVICE
04/01/2008	TEST CUSTOMER	25,000	Conventional Oil Change
03/27/2008	TEST CUSTOMER	51,052	Conventional Oil Change
03/24/2008	TEST CUSTOMER	51,051	Conventional Oil Change
03/24/2008	TEST CUSTOMER	51,050	FRONT DIFFERENTIAL,REAR DIFFERENT
03/20/2008	TEST CUSTOMER	51,042	Tire Balance
03/20/2008	TEST CUSTOMER	51,041	

Driver's Company Information

Name *

Address1

Address2 Zip

City State

Phone () - -

Cancel Save Save And Continue

New Customer – Existing Vehicle

This type of guest is a **new** customer (they have never been to VIOC) driving an existing vehicle (the vehicle has been serviced at a VIOC before).

- From the **Greeted** area double-click the vehicle being serviced.

Vehicle Status NAKYLEXPOS11

Daily Activity Menu Invoice Menu Cash Recon/End Day Menu Admju Menu Help

Vehicle Status

Greeted

No.	Status	Name	Make	Model	Year	Time In	Time Elapsed
1	Greeted	George Bush	HONDA	ACCORD	1999	09:14:07 AM	26:03:53
2	Greeted		VOLVO	V70	2003	11:15:47 AM	00:02:13

- Enter the vehicle **License Plate** and **Mileage**.

Menu Service Desk Menu Help

Valvoline

License Plate * OH WQ400 Mileage * /561miles

Model COROLLA Engine 4 CYL. 1.8L 110 FI (1ZZ-FE)

Last Service Last Mileage miles

- The old customer information will appear. Click the **New Customer** button to remove the old customer information.

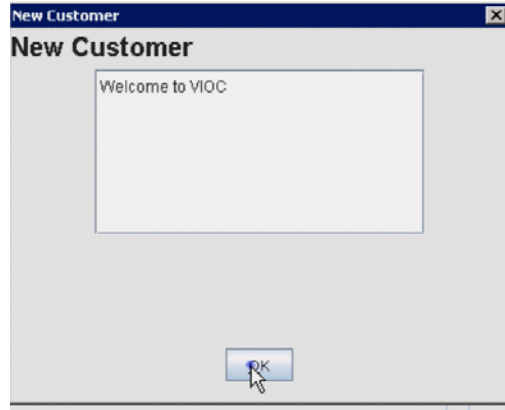
Customer Info

Customer History for

Visit Date

New Customer Customer Lookup

- Click **OK** on the **New Customer** window.



- Enter the new customer's **Title, First and Last Name, Address, Zip Code, Phone Number, E-Mail Address, and Driver's Name.**

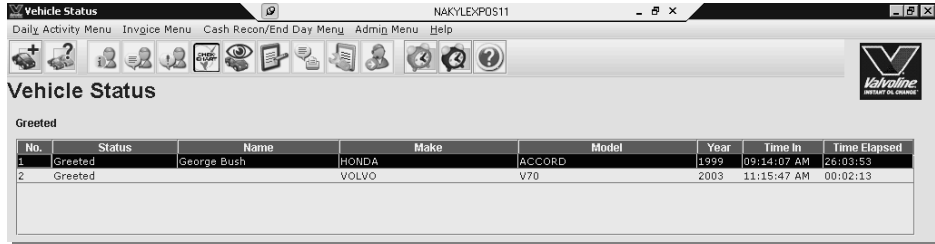
- Verify the customer's information and then click the **Save and Continue** button to continue with invoicing.

Visit Date	Driver Name	Mileage	
04/09/2008	TEST CUSTOMER	60,002	Valvoline SynPower Oil Change,SERPER
04/03/2008	TEST CUSTOMER	60,001	Tire Rotation Service,Conventional Oil (
04/02/2008	TEST CUSTOMER	60,000	FRONT DIFFERENTIAL
04/02/2008	TEST CUSTOMER	25,000	TRANSMISSION SERVICE
04/01/2008	TEST CUSTOMER	25,000	Conventional Oil Change
03/27/2008	TEST CUSTOMER	51,052	Conventional Oil Change
03/24/2008	TEST CUSTOMER	51,051	Conventional Oil Change
03/24/2008	TEST CUSTOMER	51,050	FRONT DIFFERENTIAL,REAR DIFFERENT
03/20/2008	TEST CUSTOMER	51,042	Tire Balance
03/20/2008	TEST CUSTOMER	51,041	

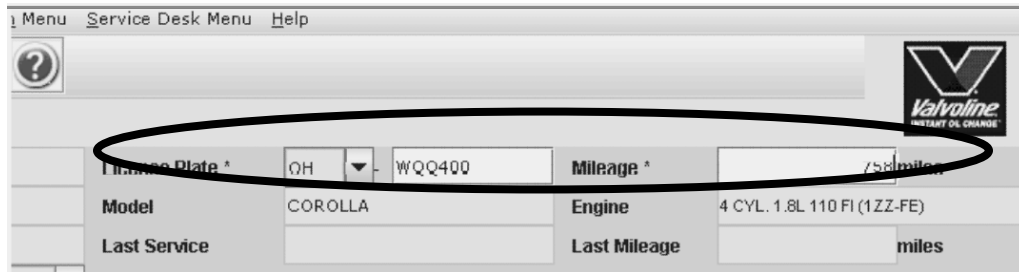
Existing Customer – Existing Vehicle

This type of guest is an existing customer (they have been to VIOC before) servicing their existing vehicle (the vehicle has been serviced at VIOC before) that is new to the customer.

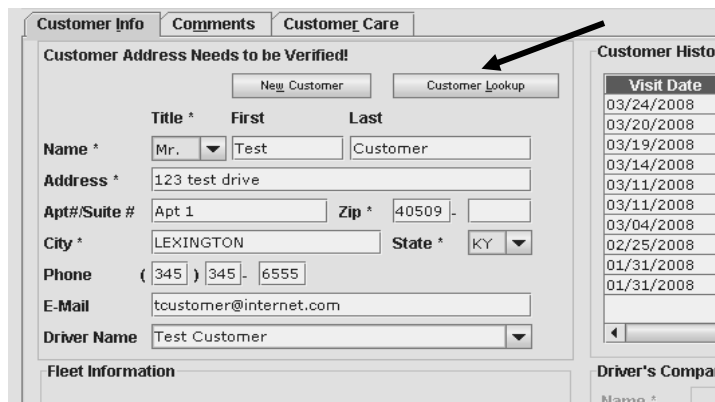
1. From the **Greeted** area double-click the vehicle being serviced.



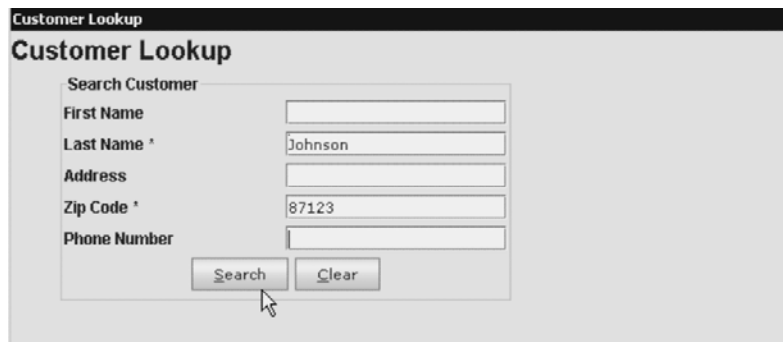
2. Verify the vehicle **License Plate** and enter the **Mileage**.



3. This will bring up the customer's information. Click the **Customer Lookup** button to change the customer information.



4. Enter the customer's **name and zip code** and click **Search**.



- Select the correct customer from the list by double-clicking the appropriate line.

Customer Lookup

Search Customer

First Name

Last Name *

Address

Zip Code *

Phone Number

Search Results

First Name	Last Name	Address	Zip Code	Phone
JOHN	JOHNSON	808 HOPE PLACE ...	87123	505-292-298

- Verify the customer's information and update if necessary. Click the **Save and Continue** button to continue with invoicing.

Customer Care

Customer Info

Customer Care

Customer History for this Vehicle

Visit Date	Driver Name	Mileage	Service
04/09/2008	TEST CUSTOMER	60,002	Valvoline SynPower Oil Change, SERPER
04/03/2008	TEST CUSTOMER	60,001	Tire Rotation Service, Conventional Oil
04/02/2008	TEST CUSTOMER	60,000	FRONT DIFFERENTIAL
04/02/2008	TEST CUSTOMER	28,000	TRANSMISSION SERVICE
04/01/2008	TEST CUSTOMER	25,000	Conventional Oil Change
03/27/2008	TEST CUSTOMER	51,052	Conventional Oil Change
03/24/2008	TEST CUSTOMER	51,051	Conventional Oil Change
03/24/2008	TEST CUSTOMER	51,050	FRONT DIFFERENTIAL, REAR DIFFERENTIAL
03/20/2008	TEST CUSTOMER	51,045	Tire Balance
03/20/2008	TEST CUSTOMER	51,041	

Driver's Company Information

Name *

Address1

Address2

City

State

Phone () - -

SAY: “Mr. Smith, I’ve captured your address information. I have you at 3499 Blazer Parkway in Lexington, KY 40509 and your phone as (859)357-1000. Is everything correct?”

Existing Customer – New Vehicle

This type of guest is an existing customer (they have been to VIOC before) driving a new vehicle (the vehicle has never been serviced at VIOC).

- From the **Greeted** area double-click the vehicle being serviced.

Vehicle Status

Vehicle Status

Greeted

No.	Status	Name	Make	Model	Year	Time In	Time Elapsed
1	Greeted	George Bush	HONDA	ACCORD	1999	09:14:07 AM	26:03:53
2	Greeted		VOLVO	V70	2003	11:15:47 AM	00:02:13

- Click **Cancel** to move past the **Vehicle Lookup** window.

Vehicle Lookup

Search Vehicle

MVP Number *

License Plate

3. Enter the vehicle **License Plate** and **Mileage**.

A screenshot of a software interface for vehicle information. The 'License Plate' field contains 'OH' in a dropdown and 'WQQ400' in a text box. The 'Mileage' field is empty. Other fields include 'Model' (COROLLA), 'Engine' (4 CYL. 1.8L 110 FI (1ZZ-FE)), and 'Last Mileage' (miles). A Valvoline logo is in the top right corner.

4. Click the **Customer Lookup** button.

A screenshot of the 'Customer Info' form. It has fields for Name (Title, First, Last), Address, Apt#/Suite #, Zip, City, State, Phone, E-Mail, and Driver Name. There are buttons for 'Neg Customer' and 'Customer Lookup'. A 'Customer History for this Vehicle' table is on the right.

5. Enter the customer's **name and zip code** and click **Search**.

A screenshot of the 'Customer Lookup' search form. Fields include First Name, Last Name (Johnson), Address, Zip Code (87123), and Phone Number. 'Search' and 'Clear' buttons are at the bottom.

6. Select the correct customer from the list by double-clicking the appropriate line.

A screenshot of the 'Customer Lookup' search results. The search criteria are the same as in the previous screenshot. Below the search form is a table with the following data:

First Name	Last Name	Address	Zip Code	Phone N
JOHN	JOHNSON	808 HOPE PLACE ...	87123	505-292-298

The first row is highlighted, and a mouse cursor is over it.

- Verify the customer's information and update if necessary. Click the **Save and Continue** button to continue with invoicing.

Visit Date	Driver Name	Mileage	Service
04/09/2008	TEST CUSTOMER	60,002	Valvoline SynPower Oil Change,SERPER
04/03/2008	TEST CUSTOMER	60,001	Tire Rotation Service,Conventional Oil
04/02/2008	TEST CUSTOMER	60,000	FRONT DIFFERENTIAL
04/02/2008	TEST CUSTOMER	25,000	TRANSMISSION SERVICE
04/01/2008	TEST CUSTOMER	25,000	Conventional Oil Change
03/27/2008	TEST CUSTOMER	51,052	Conventional Oil Change
03/24/2008	TEST CUSTOMER	51,051	Conventional Oil Change
03/24/2008	TEST CUSTOMER	51,050	FRONT DIFFERENTIAL,REAR DIFFERENT
03/20/2008	TEST CUSTOMER	51,042	Tire Balance
03/20/2008	TEST CUSTOMER	51,041	

SAY: “Mr. Smith, I’ve captured your address information. I have you at 3499 Blazer Parkway in Lexington, KY 40509 and your phone as (859)357-1000. Is everything correct?”



Existing vehicles new to the POS system (they were serviced prior to the installation of the new POS system) can be accessed by using the **Vehicle Lookup** window.

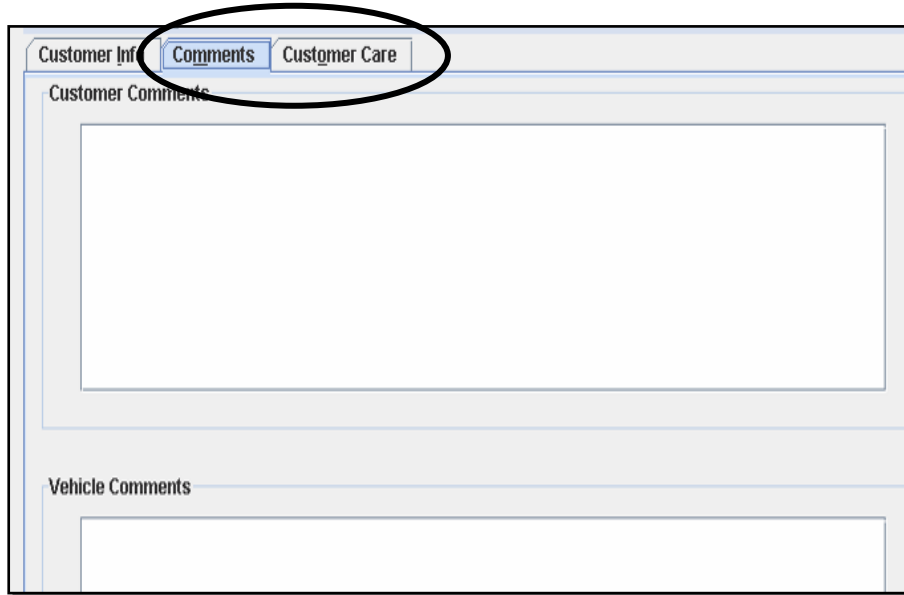
In the **Vehicle Lookup** window, enter the **MVP Number** and click **Search**. Double-click the correct vehicle from the list and verify customer information.

Fleet Customers

Follow the instructions for entering customer information as described in the previous steps. On the customer information page click on the **Customer Type** drop box and choose the correct option – Fleet Credit Card or Local/National Fleet – as shown below.

Additional Guest Information

Additional information may be present for each guest in the form of **Comments** and **Customer Care**. This can be accessed and edited by click on the appropriate tab.



The screenshot shows a software interface with three tabs at the top: 'Customer Info', 'Comments', and 'Customer Care'. The 'Comments' and 'Customer Care' tabs are circled in black. Below the tabs, there are two large empty text input areas. The first is labeled 'Customer Comments' and the second is labeled 'Vehicle Comments'.

Comments will be seen at future visits to all VIOC service centers. An example of a guest comment is, “The owner’s pet loves the dog treats.” An example of a vehicle comment is, “The guest is aware that the air filter housing is broken.”



Comments entered in this section do not print on the invoice, but please remember to never enter a negative or possibly offensive comment.

Customer Care comments refer to information concerning service failures, fleet charge backs, guarantees, complaints and returned checks.

When a new item is added to any of these areas the table will turn **red**. This is to make you aware that it needs to be reviewed.



This information is for viewing only and cannot be edited at the service center.

Please be careful when viewing this information. You need to view it and become aware of anything that has been entered, but we do not want the guest to see it. So make sure you view and close the screen as quickly as possible.



Guest Greeting OBSERVE/DO/CERTIFY Checklist

Watch your Service Center Manager (or assigned Trainer) demonstrate the following activities. (After he or she demonstrates an activity, check it off in the Observe column.) Then perform the same activities as the Service Center Manager observes and offers help. After you perform an activity satisfactorily, your Trainer will check it off in the ‘do’ column. Be sure to take notes on any procedures you feel will help you carry out these responsibilities in the future. The Certify column will be used to note that you have performed the guest greeting procedures perfectly and you are guest service certified on the new VIOC Customer Care Points.

Task 1: Fast and Friendly Greeting (on the lot)

Activity	Observe	Do	Certify
1. Within 20 seconds pickup a brochure and smile as you greet the guest.	_____	_____	_____
2. Welcome the guest to VIOC by introducing your self and offering assistance. Say: “Hello, my name is Andy. How may I help you today?”	_____	_____	_____
3. Provide the guest a brochure and point out the items as you state them. Say: “Here is a brochure about us and our services. Please notice that our oil change service includes a full service oil change and safety inspection. Here is our VIOC promise and our goal to earn your return by providing the best possible service. And, on the inside you will see our Valvoline oils and some of the packages we offer.”	_____	_____	_____

Activity	Observe	Do	Certify
4. Say: “We have ___ cars in front of you. One of them is just finishing up, so it shouldn’t be long before we get you in. Thank you for waiting.”	_____	_____	_____
5. Ensure the bay door is open enough to clear the top of the vehicle and bring them in on the tire rotation bay, if available.	_____	_____	_____
6. Smile and look the guest in the eyes.	_____	_____	_____
7. CALL OUT: “Clear for Guest, Bay__!”	_____	_____	_____
8. Wait for a response from bottom side.	_____	_____	_____
9. In a friendly manner, use clear hand signals (both arms bending at the elbow) to guide the vehicle into the bay and over the floor opening.	_____	_____	_____
10. Step to the outside corner of the yellow safety line once the front of the vehicle is half way over the floor opening.	_____	_____	_____
11. Acknowledge the guest in a positive manner once in position over the bay (thumbs up, “perfect”, “thank you”, “nice job.”)	_____	_____	_____

Task 1: Fast and Friendly Greeting (in the bay)

Activity	Observe	Do	Certify
1. Ensure the bay door is open enough to clear the top of the vehicle and bring them in on the tire rotation bay, if available.	_____	_____	_____

Activity	Observe	Do	Certify
2. CALL OUT: “Clear for Guest, Bay__!”	_____	_____	_____
3. Wait for a response from bottom side technician.	_____	_____	_____
4. In a friendly manner, use clear hand signals (both arms bending at the elbow), to guide the vehicle into the bay and over the floor opening.	_____	_____	_____
5. Step to the outside corner of the yellow safety line once the front of the vehicle is half way over the floor opening.	_____	_____	_____
6. Make eye contact and smile.	_____	_____	_____
7. Acknowledge the guest in a positive manner once in position over the bay (thumbs up, “perfect”, “thank you”, “nice job.”)	_____	_____	_____
8. Welcome the guest to VIOC by introducing yourself and offering assistance. (ex. “Hello, my name is Andy. How may I help you today?”).	_____	_____	_____

Task 1: Guest is in the Bay – Greeting Continues

The above lists the Observe/Do/Certify Checklists for Fast and Friendly greeting for both on the lot and in the bay. This is the remaining list after the guest has been greeted and is in the bay. (The number of the Observe, Do, Certify steps picks up from the Full Greeting In Bay list.)

Activity	Observe	Do	Certify
9. Say: “Could you please leave your car running and pop the hood so we can get started on your oil change right away.”	_____	_____	_____

Activity	Observe	Do	Certify
10. Say: “Jim (top-side technician) has checked your transmission and the level is (full/low/sealed/manual) and now we are going to start your safety inspection with your lights.”			
11. Guide the guest through a vehicle light inspection and check: (Use “Please” and “Thank-you” after each check.) a. Headlights b. High Beams c. Turn Signals d. Marker lights e. License plate lights f. Brake lights			
12. CALL OUT: “Lights checked, Bay__!”			
13. Say: “May I open your door to scan your VIN and check your tire pressure?” Obtain tire pressure and scan VIN. Inform technician of tire pressure.			
14. Say: “At this time, I need to get some information from you. May I have the mileage on your vehicle?”			
15. Say: “Great, could you please remove your keys and place them on the dash for safety purposes?”			
16. Verify the oil filter on the Chek-Chart Screen and CALL OUT: “(oil filter #), Bay__!”			
17. Verify/Obtain the guest’s name and address information. <ul style="list-style-type: none"> If new guest: ask him or her name and address information and type directly into POS. 			

Activity	Observe	Do	Certify
<ul style="list-style-type: none"> • If existing guest: verify that name, address and phone number is accurate. • If fleet guest: also obtain fleet card or booklet. 			
<p>18. Say: “You’ll be hearing us communicate back and forth, and we are doing this for accuracy and safety.”</p>			
<p>19. Provide the guest a brochure and point out the items as you state them. (Skip this step if the guest was greeted on the lot.)</p> <p>Say: “Here is a brochure about us and our services. Please notice that our oil change service includes a full service oil change and safety inspection. Here is our VIOC promise and our goal to you. And, on the inside you will see our Valvoline oils and some of the packages we offer.”</p>			
<p>20. Say: “If you have any questions my name is _____.”</p>			



Task 3: Check Transmission Fluid Level

1. Once an oil change service has been determined:
 - a. Request that the guest pop the hood.
 - b. Check the automatic transmission fluid by removing the dipstick, wipe it clean, and then re-insert it all the way to take an accurate reading.
 - c. Remove dipstick again to check fluid level.



Some cars with automatic transmission (e.g., Honda) are checked when the car is not running. Chrysler rear-wheel drive vehicles must be checked in neutral. There are other vehicles that also must be checked in neutral. Consult the Chek-Chart for the correct recommendation.

CALL OUT: “Transmission checked, Bay__!”

2. Add transmission fluid, if necessary.
 - a. Check the dipstick.
 - b. Check the Chek-Chart Reference Guides or VIOC point of sale system.

CALL OUT: “Adding to transmission, Bay__!”

3. Once the car has been turned off:
 - a. Make sure the keys are out of the ignition
 - b. Remove the oil cap.

CALL OUT: “Show time, Bay__!”



If the vehicle is equipped with a skid plate the bottom-side technician will call out “*Skid plate, Bay __!*” Respond with:

Call Out: “Skid Plate, Bay__!”

Inform the CSR that the vehicle has a skid plate.



When the bottom-side Technician shows you the new oil filter, verify it is the correct one. **Call Out:** “(Oil filter #) Checked, Bay__!”

Example: “*VO 23 Checked, Bay__!*”



Need for Speed Tip

Speed Matters. The pace at which you move during an oil change has two dramatic effects on our success. First, when you move faster, services are completed faster, therefore emptying our bays and freeing up space for more oil changes. Second, when guests see you working with a sense of urgency, they are more pleased with our service and convinced that you are doing all you can to help them back to their busy day. Sense of urgency is a spotlight behavior.



Task 4: Remove Air Filter



1. Remove the air filter cover.



Do not remove the air filter on cars that have less than ten thousand miles or that have had the air filter replaced in the previous ten thousand miles according to our records.

2. Remove the air filter.



Be careful when working with plastic air filter housings. Over tightening the bolts could cause the housing to strip. If you unplug a sensor during removal, ensure it is reconnected.

3. Prepare the air filter for the CSR to show to the guest during the visual inspection presentation.
4. Replace/install new air filter when the CSR is finished with it.

- TIPS:**
- GM MAF sensor:
 - Little black box mounted to air cleaner or air intake hose.
 - Usually in the way when getting at a PCV valve.
 - Be careful to not pull the wires or break the box — the vehicle will not run without it.



Task 5: Test Battery

1. Press the **POWER** button on the ED-18 battery analyzer. The analyzer will take approximately eight seconds to boot up while testing the integrity of its software.



The ten thousand mile rule also applies to batteries, i.e. no check if car is less than ten thousand miles or if battery has been replaced in the last ten thousand miles according to our records.

2. Select the **TEST** icon and press **ENTER**.
3. Select your technician ID. Press **ENTER** to continue.
4. The Hello screen will appear, showing the total number of tests completed for the month. Press **BACK** to return to the battery test.
5. Select the location of the battery. The **OUT OF VEHICLE** option is for a battery that is disconnected from the vehicle. For most **VIOC** applications, select **IN VEHICLE**. Press **ENTER** to continue.
6. Select the battery's post type. Press **ENTER** to continue.



The preferred test location is at the battery posts. If you select **REMOTE**, the analyzer may find the test results inconclusive and ask you to test at the battery.

7. Select the **BATTERY TYPE**. Press **ENTER** to continue.
8. Select the rating units. The rating units and rating (see step 9) are printed on the battery label. If the information is unreadable, use the *Battery Replacement Guide* on the SD card. Press **ENTER** to continue.
9. Select the rating or, in the case of **JIS**, the part number. Press the **UP** or **DOWN ARROW** key (or use the numeric keys to enter **CCA**, **CA**, or **DIN**). Scrolling increase and decreases the units by 5. To increase your scrolling speed, hold the **UP** or **DOWN ARROW** key. The default selection is 550 for all rating standards except **JIS**, which consists of part numbers. The entry range is 100 to 3000 except for **DIN**, which has a range of 100 to 1000. Press **ENTER** to continue.
10. To measure the battery temperature, aim the ED-18 IR temperature sensor 1 to 2 inches from the top or side of the battery. The arrow on the top of the housing indicates the sensor's location. When the measured temperature on the display stabilizes, press **ENTER**.

11. For a more decisive result the analyzer may prompt for additional information. The following messages and instructions may appear before the analyzer displays the results of your test.

System Noise/Check Loads

The analyzer has detected computer or ignition noise, or parasitic drain, and will attempt to retest. Make sure all vehicle loads are off and the ignition is in the off position. The analyzer will automatically retest when it no longer detects the system noise. Beware! You may be testing too close to a noise source, such as a charger or other high-current device.

Unstable Battery

A battery that is very weak or that has just been charged will retain enough electrical activity, which the analyzer has detected, to adversely affect the test results. A fully charged battery should stabilize quickly, after which the analyzer will automatically retest. Weak batteries should be charged and retested.

Was the Battery Charged Before Testing

For a more decisive result, the analyzer may ask if you are testing the battery before or after fully charging it. If the vehicle has just been driven, select **BEFORE CHARGING** and press **ENTER**. The analyzer will resume the test after you make your selection.

Surface Charge Detected

The battery will hold a surface charge if the engine has been running or after the battery has been charged. The analyzer may prompt you to remove the surface charge before it begins testing.

- Follow the analyzer's instructions indicating when to turn headlights on and off.
- The analyzer will resume testing after it detects that the surface charge is removed.

Multi-Scan Test

In some cases the analyzer may need to further analyze the battery to determine whether the battery should be replaced or if it has a chance to be recovered. In these cases, it will conduct a multi-scan test for a few seconds.

12. If the estimated age of the battery is known, press the **UP** or **DOWN ARROW** key or use the numeric keys to select the estimated age of the battery in months. To increase your scrolling speed, hold the **UP** or **DOWN** arrow key. If the estimated age of the battery is unknown, press the **RIGHT ARROW** key. The age field will be blank in the display and printed test results.
13. Press the **ENTER** key to obtain the battery test results. The ED-18 will display the battery analysis. If you've selected the **IN VEHICLE** test, the first screen displayed will instruct you to press **ENTER** to continue with the system test or press **BACK** to the print the results and return to the main menu.

CALL OUT: “Battery checked, Bay__!”

Battery Test Results

The first results screen will show GOOD, MARGINAL, or REPLACE and the battery’s measured voltage and CCA. The screen includes a curved, three section bar graph representing the battery’s condition.

- A good battery is represented by a black bar that extends to the right section of the curve. Make no recommendation to the customer.
 - A marginal battery is represented by a black bar that extends into the curve’s middle section.
 - A battery that requires replacement is indicated by a bar that extends only to the curve’s first section or is missing.
 - The results may read CHARGE & RETEST or FROZEN BATTERY. Take no action in these cases.
14. If the test results read marginal or replace, keep the clamps connected to the battery and press **BACK** to print the results for the CSR. Let the CSR know that the batter failed the initial test, and that a starter and charging system test are required to determine if the battery is failing.
 15. If the customer agrees to further testing, perform the procedures in the extra services section of this guide when the oil change is complete.



Task 6: Inspect Serpentine Belt

1. Inspect belt for signs of wear. Use a flashlight. Replacement should be recommended when there are three or more cracks per inch or the length of any one crack is longer than ½ the belt width.
2. Check tensioner alignment.

CALL OUT: “Belt checked, Bay__!”



Task 7: Check the Wiper Blades and Tires

1. Check driver’s side wiper blades.
2. Check driver’s side tire pressure. The pressure information should have been provided by the person who performed the greeting.
3. Check the rear wiper blade (if equipped).
4. Check passenger side tire pressure.

5. Check passenger side wiper blade.

CALL OUT: “Tires set, wipers checked, Bay__!”

6. Replacement wipers should be recommended when:
 - a. Rubber is torn, badly worn, brittle, cracked, or missing.
 - b. The frame is damaged or bent.
 - c. Rubber is greasy, soft, or lying flat on windshield.
 - d. Blades are streaking, squeaking, chattering, or marking the windshield.
 - e. Blades haven't been replaced in six months.



All fluid checks should be performed in this exact order for the purposes of ensuring consistency.



Need for Speed Tip

It is okay to begin checking the tires and wipers on the side of the car that is most convenient.

WIPER INSTALLATION TIPS

DO

- Make sure your hands are clean
- Parts are fragile — handle with caution
- Use a towel to protect the windshield
- Test new wiper refills or blades by asking the guest to press the wash button during zoom

DO NOT

- Touch the rubber portion of blade
- Lay the wiper arm on the windshield without the blade installed
- Allow the wiper arm to stand up away from the windshield
- Use excessive force
- Pry the wiper blades off
- Test new wiper refills or blades by running the wipers across the dry windshield.



Task 8: Check Brake Fluid Level

1. Check that the brake fluid level is within the maximum and minimum marks in the reservoir.

CALL OUT: “Brake fluid checked, Bay__!”

2. If the brake fluid level in the reservoir is low or uneven, note it on the POS or communicate it to the CSR.



VIOC does NOT top off brake fluid. A low fluid level can mean a serious brake problem, like worn brake pads, or a leak in the system.



Task 9: Check Power Steering Fluid Level

1. Check the power steering fluid reservoir or dipstick:
 - a. Wipe dipstick, reinsert, and remove again.
 - b. Some dipsticks are marked with both HOT and COLD level markings.
2. If low, use Chek-Chart information in the POS system.



If you have to add fluid to the power steering, be sure to **Call Out:** “Clear to add, Bay__!”

CALL OUT: “Power steering checked, Bay__!”



Task 10: Check Windshield Washer Fluid Level



Some vehicles also have rear washer reservoirs.

CALL OUT: “Clear for washer fill, Bay__!”

1. Fill reservoir with washer fluid.
2. Replace cap immediately before replacing hose.



- **DO NOT confuse the windshield washer reservoir with the coolant reservoir.**
- **DO NOT fill to top of reservoir in freezing weather.**
- **Be careful not to bump or spill fluid on the guest’s vehicle.**



Task 11: Check the Coolant Level

-
- SAFETY**
- Use extreme caution when vehicles are hot.
 - Coolant can cause burns
 - Radiators under pressure can spray hot antifreeze
 - Do NOT stand directly over the coolant cap or fill hole.
 - Do NOT remove the radiator caps.
 - Check the coolant level and test the anti-freeze from the overflow bottle ON ALL VEHICLES.
-

1. Before opening the coolant reservoir cap, squeeze the upper radiator hose:
 - If too hot or pressure is too great — check antifreeze level during the zoom.

CALL OUT: “Clear for coolant check, Bay__!”

2. Wait for bottom-side Technician’s response then open the cap using the six-finger method and towel as demonstrated below then proceed with call out.

CALL OUT: “Caps off, Bay__!”



Cover cap with a shop towel. Place thumb, middle, and index finger from both hands on cap and turn to loosen.



Lift cap towards you to allow steam to escape away from you.

3. Check the coolant level in the overflow bottle. The level should be between the “low” and “full” marks. Add the correct coolant if needed.



Vehicles that use extended-life coolants (such as GM’s Dex-Cool) should only be flushed or added to with the same type of coolant (Zerex DEX-COOL[®] meets this standard). Standard green coolants should not be mixed with these extended-life coolants.

4. **IF the guest requests a temperature reading** (if the guest does not request this service proceed to step 5)
 - a. Take a sample of antifreeze with a hydrometer.
 - b. Inform the guest of the protection level.
5. Replace the cap immediately after inspecting the cooling system.



Task 12: Install Oil



Some vehicles require that the oil filter be changed from the topside. If the vehicle you are servicing is designed this way, the oil filter should always be changed before new oil is installed in the vehicle. Follow the steps for changing the oil filter as found in this Study Guide under “Bottom-Side Service Procedures” steps 8 through 14. Before loosening the filter, be sure to **CALL OUT**: “Clear for hot oil, Bay__!” and wait for the bottom-side technician to respond.

CALL OUT: “Ready for oil, Bay__?”

1. Wait for the bottom-side Technician to call out: “Ready for oil, Bay__!”
2. Verify the proper weight and amount of oil on the Work order.

CALL OUT: “(#) quarts (quality), going in, Bay__!”

A typical callout here would be: “5 quarts, DuraBlend going in, Bay__!”

3. Install the oil.

4. Immediately replace the oil cap before hanging up the oil gun (This confirms that oil has already been added.)

CALL OUT: “Oil in, ready for seconds, Bay__!”



- **DO NOT leave the oil gun hanging unattended in the vehicle.**
- **On Saab vehicles:**
 - (On some Saabs), the oil filler cap is on a standpipe (also the dipstick).
 - **This cap must be on tight for the car to run.**
 - **TRIPLE-CHECK this cap on all Saabs**



Task 13: Perform Second Check for Bottom-Side Technician

1. Bend over and visually verify bottom-side Technician putting a wrench on the following, as appropriate:
 - Oil filter
 - Oil drain plug
 - Differential/transfer case/manual transmission (only if guest requested a check.)

CALL OUT: “Check!”(As bottom-side technician puts a wrench on each item).

2. Look to see that the old filter and gasket are in the bottom-side Technician’s hand.
3. Verify that the correct amount of fittings have been lubed.

CALL OUT: “Seconds complete, clear for zoom, Bay__!”

4. Be sure bottom-side Technician calls out “Clear, Bay__!”



Task 14: Start Vehicle & Check Oil Pressure

1. Ask the guest to start the vehicle if he or she is sitting in it:



If the guest is not available, start the vehicle yourself. Keep both feet in vehicle. Be sure you sit in the vehicle with your foot on the brake before starting!



Make sure that your hands, uniform, and work shoes are clean, and that there are no tools in your pockets. If this is not the case, ask someone else to start the vehicle for you.

- SAFETY**
- **Make sure the bottom-side Technician is completely finished before the second-party check begins.**
 - **In case of manual transmissions, make sure the vehicle is in NEUTRAL with the brake pedal and clutch pedal depressed.**
 - **NEVER stand in front of or behind the vehicle when it is being started for zoom.**
 - **DO NOT reach in through an open window and start a vehicle.**
-

2. Check that the oil pressure light comes on, then goes out OR check that the oil gauge registers oil pressure.

Guest Experience Moment -

If your guest seems interested in the oil change process ask them if they would like to make the call out listed below. Example: Would you like to be part of the Valvoline team today? Repeat after me loudly, “Oil Pressure Bay__.”

CALL OUT: “Oil pressure, Bay__!”

3. Listen for bottom-side Technician response.
4. Look in Chek-Chart to see if the vehicle is equipped with an Oil Service Indicator Light.
 - a. If the vehicle has an Oil Service Indicator Light, explain to the guest that the light needs to be reset manually after every oil change. Step the guest through the process of resetting the light. DO NOT put your hands in the customer’s vehicle without permission.
 - b. Instructions for resetting the light can be found in the following locations:
 - i. Quick Lubrication Guide, Appendix B
 - ii. VIOC Wired, “Superior Service” section (company-owned stores)
 - iii. Viocconnect.com (franchise stores)

- c. Document on the POS under “Maintenance Checks” using the appropriate criteria from the drop box.

Maintenance Checks	Action
Lubrication Points	<input type="text"/>
Oil Service Indicator Light	<input type="text"/>
Oil Drain Plug & Gasket	<input type="text"/>
Brake Fluid Level	Reset Not Reset NA
Power Steering Fluid Level	<input type="text"/>
Battery	<input type="text"/>
Windshield Washer Fluid Level	<input type="text"/>
Coolant Reservoir Level	<input type="text"/>
Tire Pressure	<input type="text"/>
Transmission Fluid Level	<input type="text"/>

SAFETY Depending on the vehicles method of resetting the light, it may be necessary to turn the vehicle off **BUT** leave the ignition on.

If this is necessary, **call out “CLEAR FOR KEY”** to inform all that the key is in the ignition and in the ‘on’ position.

When the key is in the ignition, make sure no one is in front of or behind the vehicle, and the bottom-side technician is off the catwalk.

5. Ask the guest to turn off the vehicle or do it yourself if the guest is unavailable.
6. Wipe the oil dipstick with a towel.
7. Check the oil level.
8. Show the dipstick to the guest and confirm that the proper amount has been added.



Task 15: Top-side Second Check



Wait until the bottom-side technician has called out **“Pit cover closed, Bay ___!”** before completing second checks and closing the hood of the vehicle.

If the vehicle has a skid plate, it may be necessary to inform the guest that it must be reinstalled and you will have them on the road momentarily.

1. Conduct a second check under the hood only after you have heard the bottom-side tech **CALL OUT: “Pit cover closed, Bay ___!”**

2. Check to make sure that the following are reinstalled properly, moving from the driver to the passenger side of the vehicle:
 - a. Brake cap
 - b. Washer cap
 - c. Power steering cap
 - d. Oil cap
 - e. Coolant cap
 - f. Oil stick
 - g. Transmission stick
 - h. Air filter

CALL OUT: (Order may vary) “Brake cap tight, washer cap tight, power steering cap tight, oil cap tight, coolant cap tight, oil stick down, transmission stick down, air filter secure, seconds complete, ready to roll, Bay__!”

3. Make sure that the hood prop rod (if equipped) is lowered before closing the hood:
 - a. Carefully close hood with a clean towel.
 - b. Make sure the hood is properly closed.
 - c. Wipe any finger marks or oil spots on outside of vehicle.



Be extremely careful when closing the hood. Be sure the hood prop is down and close gently.



Don't let finger marks and oil spots on the outside of the vehicle be the reason a guest does not return. What is the lifetime value of a customer???

4. Make sure the bottom-side technician has completely closed and latched the pit covers after the car has been started.
5. As the guest drives out, observe under the vehicle for any leaks.



Need for Speed Tip

Being prepared for the next “rush” is key to speedy service times.

As soon as the bays are empty use your time to prep for the next service.

- Hand towels stocked
- Tools cleaned and put away
- Extra service equipment emptied of waste and filled with new product
- Clip boards prepared
- Podiums clean and free of clutter
- Trash cans emptied Wiper blades stocked
- Wipe up spills and standing fluids

These items should be maintained before breaks are taken.

What else can you do to prepare to exceed guest expectations?



Task 16: Maintain Top-Side Service Area

1. Make sure the top-side service area is kept clean, neat, and well organized at all times.
2. Clean the guest waiting area:
 - a. Make sure that floors, windows, benches, and counter tops are clean at all times.
 - b. Organize newspapers and magazines.
 - c. Check to make sure signage is on.
3. Wipe up spills immediately.
4. Empty trash barrels as often as possible during the day:
 - a. Wipe them down regularly to eliminate oil streaks and runs
5. Wipe down and replace tools immediately after each use.
6. Be sure that the floor remains clean throughout the day.
7. Spot-clean the walls as needed.
8. Be sure the restrooms are clean:
 - a. Spot-clean and make sure the restrooms are stocked with toilet paper and towels.
 - b. Be sure the lights work and are turned off when not in use.



Dirty, messy Service Centers, especially waiting rooms and restrooms, damage VIOC's reputation for quality service! Make sure your Service Center is kept "guest" clean.

9. Keep work counters and the desk area neat and free of old parts, papers, boxes, and dirty towels:
 - a. Guests may judge your Service Center by how the desk area is maintained.
 - b. Personal belongings do not belong on the counter or desk.



Grease and oil on vehicles or on guests can result in lost guests and needless guest service failures.



Spotlight Behaviors

Within the full guest service process lie certain behaviors that need to be exhibited to assist you with providing a great experience. These are called “Spotlight Behaviors”. Spotlight Behaviors were created to specifically assist you in over delivering on customer expectations.

Spotlight Behaviors Questions

Question: What are spotlight behaviors?

Question: Why should I have to do these behaviors for every customer?

Question: Can you give examples of how spotlight behaviors will exceed customer expectations?

Question: Take a look at the spotlight behaviors and pick one. Write it out and then list what positive impact it will have on the customer.



Test Your Knowledge: Top-Side Test

Before you meet with your trainer, take a moment to test your SuperPro 10 knowledge. Follow the steps below to take the **Top-Side** test.

Once you have completed the test print the last page that includes your results to give to your trainer during your next training meeting.

Accessing the Course:

Follow the instructions below to access the *Top-Side Test* course:

1. In the Address line of your internet browser, enter **www.learnvalvoline.com**.
2. Enter the user name and password provided by your manager.
3. Click the **Login** button. The VIOC University home page displays.

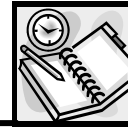
Taking the Course:

To take the course:

1. Click the **Technician** header to see available technician-level courses and tests.
2. Click the course title ***Top-Side Test***. The course description displays.
3. Click the **Take Course** button. The course launches.
4. Take the course and close the course window.
5. To end your session in VIOC University On-line, click the **Logout** button located in the top right corner of your screen.



Meet With Your Trainer 2



1. Note in the space provided any questions you may have about what you have read, and record the Trainer's answers to those questions.

2. Answer the Trainer's questions about what you have just read.
3. Observe the Trainer performing top-side service tasks. (Use the "Top-Side OBSERVE/DO/CERTIFY Checklist" which begins on the next page.)
4. Do these same tasks yourself while the Trainer observes and offers help. ("Top-Side OBSERVE/DO/CERTIFY Checklist" to check off your progress.)
5. Ask your Trainer the following questions. Record your answers in the space provided.
 - **What is the policy if the guest requests a free fluid refill?**

- **What is a reverse pin? On what vehicles are they most commonly found?**

6. **Date and initial the Progress Chart at the front of the manual. (Be sure your Trainer initials it also.) Then set a time for your next meeting on the line below:**

(date/time)



Top-Side OBSERVE/DO/CERTIFY Checklist

Task 2: Guide the guest into the Bay

Activity	Observe	Do	Certify
1. Make sure the bay door is open enough to clear the top of the vehicle.	_____	_____	_____
2. CALL OUT: Clear for Guest, Bay ___!”	_____	_____	_____
3. Use clear hand signals to carefully guide the vehicle into the bay and over the floor opening.	_____	_____	_____
4. Once the vehicle is halfway over the floor opening, move to the driver’s side of the vehicle outside the yellow line.	_____	_____	_____
5. Put on required PPE.	_____	_____	_____
6. CALL OUT: “Transmission checked, Bay___!” .	_____	_____	_____
7. Add transmission fluid, if necessary.	_____	_____	_____
8. CALL OUT: “Adding to transmission, Bay___!”	_____	_____	_____
9. Note added fluid.	_____	_____	_____
10. CALL OUT: “Show time, Bay___!”	_____	_____	_____
11. If bottom side calls out “Skid plate, Bay___!” respond and inform CSR that there is a skid plate present.	_____	_____	_____
12. CALL OUT: “(Oil filter #) checked, Bay ___!”	_____	_____	_____

Task 3: Remove Air Filter

Activity	Observe	Do	Certify
1. Remove the air filter cover.			
2. Remove the air filter.			
3. Prepare the air filter for CSR to show during visual inspection presentation.			

Task 4: Test Battery

Activity	Observe	Do	Certify
1. Make sure engine is off and keys are removed from the ignition.			
2. Connect ED-18II tester and Power up.			
3. Select TEST icon and press enter.			
4. Select your technician ID and press enter.			
5. Key requested information into ED18II.			
6. If additional information is required, follow prompts from ED18II.			
7. Press enter key to obtain battery test results.			
8. CALL OUT: "Battery checked, Bay ___!"			
9. Interpret test results.			
10. If marginal or replace, press back to print results for CSR.			

Task 5: Inspect Serpentine Belt

Activity	Observe	Do	Certify
1. Inspect belt for signs of wear (3 or more cracks per inch or any one crack longer than ½ the belt width). Use a flashlight.	_____	_____	_____
2. Check tensioner alignment.	_____	_____	_____
3. CALL OUT: “Belt checked, Bay__!”	_____	_____	_____

Task 6: Check the Wiper Blades and Tires

Activity	Observe	Do	Certify
1. Check driver’s side wiper and check /adjust driver side tires.	_____	_____	_____
2. Check rear wiper (if equipped).	_____	_____	_____
3. Check/adjust passenger side tires and passenger side wiper.	_____	_____	_____
4. CALL OUT: “Tires set, wipers checked, Bay__!”	_____	_____	_____

Task 7: Check Brake Fluid Level

Activity	Observe	Do	Certify
1. Check that the brake fluid level is within the maximum and minimum marks in the reservoir.	_____	_____	_____
2. CALL OUT: “Brake fluid checked, Bay__!”	_____	_____	_____
3. If low or uneven, note in the POS (or communicate to CSR).	_____	_____	_____

Task 8: Check Power Steering Fluid Level

Activity	Observe	Do	Certify
1. Check power steering fluid by removing the dipstick, wiping, reinserting and removing the dipstick.	_____	_____	_____
2. If low, add the recommended power steering fluid.	_____	_____	_____
3. CALL OUT: "Power steering checked, Bay__!"	_____	_____	_____

Task 9: Check Washer Fluid Level

Activity	Observe	Do	Certify
1. CALL OUT: "Clear for washer fill, Bay__!"	_____	_____	_____
2. Fill reservoir with washer fluid.	_____	_____	_____
3. Replace cap immediately before hanging up hose.	_____	_____	_____

Task 10: Check the Coolant Level, and Test the freeze point

Activity	Observe	Do	Certify
1. Before opening the coolant overflow or reservoir cap, squeeze the upper radiator hose.	_____	_____	_____
2. CALL OUT: "Clear for coolant check, Bay__!"	_____	_____	_____
3. Wait for bottom-side Technician's response before opening the coolant cap using the 6-finger method and towel.	_____	_____	_____
4. CALL OUT: "Cap's off, Bay__!"	_____	_____	_____
5. Take a sample of antifreeze using the antifreeze tester.	_____	_____	_____
6. Replace the cap immediately after inspecting coolant system.	_____	_____	_____

Task 11: Install Oil

	Activity	Observe	Do	Certify
1.	CALL OUT: “Ready for oil, Bay__?”	_____	_____	_____
2.	Wait for the bottom-side Technician to call out: “Ready for oil, Bay__.”	_____	_____	_____
3.	Verify the proper weight and amount of oil.	_____	_____	_____
4.	Install the oil.	_____	_____	_____
5.	CALL OUT: “(# quarts) (quality) going in, Bay__!”	_____	_____	_____
6.	Immediately replace the oil cap before hanging up the oil gun.	_____	_____	_____
7.	CALL OUT: “Oil in, ready for seconds, Bay__!”	_____	_____	_____

Task 12: Perform Second Check for Bottom-Side Technician

	Activity	Observe	Do	Certify
1.	Bend over and visually verify bottom-side. Technician putting wrench on the following: <ul style="list-style-type: none"> • Oil filter • Oil drain plug • Differential/transfer case/manual transmission 	_____	_____	_____
2.	CALL OUT: “Check!” (As bottom-side Technician puts a wrench on each item).	_____	_____	_____
3.	Look to see that the old filter and gasket are in the bottom-side Technician’s hand.	_____	_____	_____
4.	Verify that the correct numbers of fittings have been lubed.	_____	_____	_____
5.	CALL OUT: “Seconds complete, clear for zoom, Bay__!”	_____	_____	_____

Task 13: Start Vehicle

Activity	Observe	Do	Certify
1. Be sure bottom-side Technician calls out: “Clear, Bay__!”			
2. Ask the guest to start the vehicle if he or she is sitting in it. • If the guest is unavailable, start it yourself following the written procedures on page 82.			
3. Check that the oil pressure light comes on, and then goes out, OR, check that the oil gauge registers oil pressure.			
4. CALL OUT: “Oil pressure, Bay__!” (or ask guest to)			
5. Listen for bottom-side Technician response.			
6. Reset the Oil Service Indicator Light – if applicable.			
7. Ask guest to turn off vehicle or do it yourself.			
8. Wipe the oil dipstick with a towel.			
9. Check the oil level.			
10. Show the dipstick to the guest.			
11. Confirm that the proper amount has been added.			

Task 14: Conduct Second Check

Activity	Observe	Do	Certify
1. After the skid plate is secure and the pit cover is closed, perform a second check under the hood.			

Activity	Observe	Do	Certify
2. Check to make sure that the following are reinstalled properly, moving from the driver to the passenger side of the vehicle:			
<ul style="list-style-type: none"> • Washer cap • Brake cap • Oil dipstick • Power steering cap • Air filter • Coolant cap • Transmission dipstick • Oil cap 			
3. CALL OUT (ORDER MAY VARY): “Brake cap tight, washer cap tight, power steering cap tight, oil cap tight, coolant cap tight, oil stick down, transmission stick down, air filter secure, seconds complete, ready to roll, Bay__!”			
4. Make sure that the hood prop rod (if equipped) is lowered before closing the hood.			
5. Make sure the hood is properly closed.			
6. Wipe any finger marks or oil spots on outside of vehicle.			
7. Check to make sure the pit covers have been closed following the zoom.			

Task 15: Maintain Top-Side Service Area

Activity	Observe	Do	Certify
1. Make sure the top-side service area is clean, neat, and well-organized.			
2. Clean the guest waiting area.			
3. Wipe up spills.			
4. Empty and wipe down trash barrels.			

Activity	Observe	Do	Certify
5. Wipe down and replace tools.	_____	_____	_____
6. Sweep and scrub the floor.	_____	_____	_____
7. Spot-clean the walls.	_____	_____	_____
8. Clean the restrooms.	_____	_____	_____
9. Make sure the restrooms are stocked with toilet paper and towels.	_____	_____	_____
10. Be sure the restroom lights work.	_____	_____	_____
11. Keep work counters and the desk area neat and free of old parts, papers, boxes and dirty towels.	_____	_____	_____

Top-Side Call Outs

“Clear for Guest, Bay__!”

“Transmission checked, Bay__!” or “Adding to transmission, Bay__!”

“Showtime, Bay__!”

“Skid Plate, Bay__!” (Only in response to bottom-side)

“(Oil filter #) checked, Bay__!”

“Battery checked, Bay__!”

“Belt checked, Bay__!”

“Tires set, wipers checked, Bay__!”

“Brake fluid checked, Bay__!”

“Power steering checked, Bay__!”

“Clear for washer fill, Bay__!”

“Clear for coolant check, Bay__!”

“Cap’s off, Bay__!”

“Ready for oil, Bay__?”

“(# Quarts) (quality) going in, Bay__!”

“Oil in, ready for seconds, Bay__!”

“Check!” (As bottom-side Technician puts a wrench on each item).

“Seconds complete, clear for zoom, Bay__!”

“Oil pressure, Bay__!”

“Brake cap tight, washer cap tight, power steering cap tight, oil cap tight, coolant cap tight, oil stick down, transmission stick down, air filter secure, seconds complete, ready to roll, Bay__!”

Part 3: Bottom-Side Service Procedures

Tasks:

1. Perform bottom-side basic service
2. Maintain bottom-side service area

As you study the bottom-side procedures, be sure to note any questions that you may have on the Meet with your Trainer 3 and ask them during your meeting with the Trainer at the end of this chapter.



Based on the needs of your Service Center, you may start your Technician training with either Bottom-Side Service Procedures or Top-Side Service Procedures.



Bay__ is used as an example throughout this manual; you would call out “Bay 1,” “Bay 2,” “Bay 3,” or “Bay 4,” depending on the bay you’re working in at the time.



For your safety, and the safety of your coworkers, it is important that you listen for top-side call-outs as you perform your bottom-side procedures. When the top-side technician asks you to stand clear, such as to check the cooling system, you must always respond with “Clear, Bay__!” using the correct bay number.



- **If at any time service cannot be completed due to a service failure or interrupted service, top-side and bottom-side technicians must immediately go to second checks and close the pit covers.**
-



Task 1: Perform Bottom-Side Basic Service

1. Stand off the catwalk as the vehicle enters the bay.
2. Wait for the top-side Technician to call out: “Show time, Bay__!”
3. Before you begin:
 - a. Prior to stepping on the catwalk, put your safety glasses, bump hat and gloves on when you enter the pit area.
 - b. Unlatch and pull back pit cover.
 - c. If the vehicle has a skid-plate, **CALL OUT: “Skid-plate, Bay __!”** to inform the CSR that the process will take longer.
 - d. Inspect the underside of the vehicle to make sure everything looks all right – *if something is wrong notify the keyholder in charge immediately:*
 - Check for damage and dents to the oil pan.
 - Check for leaks around the oil plug, oil filter or anywhere under the vehicle.
 - Check for damaged skid plates.
 - Check for missing skid plate fasteners.



If the skid plate is missing fasteners and you **don't** have matching fasteners to replace them, inform the CSR so we may advise the customer about the need to use a zip tie for repair.

4. If the vehicle has a skid plate it **MUST** be removed to prevent frame oil from occurring. The only acceptable exception to this rule is if the skid plate has a “trap door” that allows direct access to the oil filter. In this situation, follow these steps: *(If this situation doesn't occur advance to the next step)*
 - a. If necessary, ask another technician for help with the skid-plate.
 - b. Have the technician hold the skid-plate in place while you remove the bolts.
 - c. Use socket or other appropriate tool to remove all fasteners.
 - d. If there are zip ties holding the skid plate in place:
 - Remove the zip ties with wire cutters or pliers.
 - Notify the CSR that the vehicle came in with zip ties securing the skid plate.
 - e. Place **ALL** fasteners in a container so they don't get lost.

5. Lubricate all of the following components on the chassis/driveline, if applicable, working from the driver's side to the passenger side:
 - a. Upper ball joints
 - b. Lower ball joints
 - c. Outer tie rod ends
 - d. Inner tie rod ends
 - e. Idler arm
 - f. Pitman arm
 - g. U-joints
 - h. Slip yolk (drive shaft splines)

6. To lubricate a fitting:
 - a. Wipe the fitting clean.
 - b. Push the grease gun tip straight onto the fitting.
 - c. Hold the tip firmly in place and squeeze trigger.
 - d. Be careful to prevent damage to seals by overfilling.
 - e. Wipe off any excess grease from the fitting after greasing.

CALL OUT: “(#) fittings lubed, Bay__!”



Notify the top-side Technician if a fitting is missing or did not take grease. The top-side Technician will inform the guest, and the CSR will make sure it is recorded on the invoice.

TIPS:

- A. If you have trouble reaching a fitting:
 - i. Attach either a 90 degree or needle adapter to the grease gun tip.
- B. Apply grease until the old grease and moisture is forced out on these components:
 - i. Tie rod ends
 - ii. Pitman arm
 - iii. Idler arm
 - iv. Slip yolk
- C. On U-joints, apply a quick shot of grease until you hear a “crackle”.
- D. Always check the drive shaft and rear suspension for fittings.
- E. On upper and lower ball joints, apply grease until the sealed grease cup expands.
 - i. Be careful not to over-grease upper ball joints.
 - ii. Always wipe up excess grease. It can come in contact with brake parts and cause brake failure.

TIPS:

- F. Grease fittings can be found on some drive shaft U-joints. To lubricate this type of fitting:
 - i. Push the needle type attachment nozzle against the center of the fitting.
 - ii. Maintain a constant pressure while applying grease to the fitting.
 - iii. Apply grease carefully until grease escapes out of the joint.
- G. Some vehicles have permanently sealed greased fittings:
 - i. For example, Mercedes-Benz, Toyotas, etc.
 - ii. Check for replacement fittings.
 - iii. Check the U-joint on the drive shaft.

- 7. When the CSR or topside technician calls out the correct oil filter number to be used on the vehicle, respond with:

CALL OUT: “(Oil filter #), Bay__!”

- a. Make sure that the oil filter is in stock.
 - b. If it is out of stock, notify the manager in charge immediately.
- 8. To prevent frame oil, refer to the photos below and follow the instructions:

Bottom-Side Oil Filter



Place shop towels along any part of the frame or crossbeams that are directly below the drain plug and/or oil filter.

Top-Side Oil Filter



Place a shop towel below the filter to catch excess oil when the filter is removed

9. Slide the rolling drain pan in position to catch the draining oil. *Use an oil deflector as necessary to direct oil away from vehicle's frame or skid plate and into the rolling drain pan.*

SAFETY:

- **Engine oil is hot!**
- **Beware of hot exhaust pipes. Use burn sleeves and gloves.**
- **Beware of any fluid dripping, such as washer fluid, antifreeze, and power steering fluid.**

10. Remove the oil drain plug, using the proper wrench:
 - a. Oil will begin to drain

11. Check the head, threads, and gasket of the drain plug:
 - a. If worn, stripped, rounded, or damaged, plug and/or gasket needs to be replaced.
 - b. Give the damaged plug and/or gasket to the top-side Technician, and tell him or her that you need to replace the plug.
 - c. Top-side Technician will inform guest.
 - d. If plug is okay, place the plug and wrench on the drain pan.

CALL OUT: “Drain plug looks good, Bay__!”

12. While oil is draining, loosen the oil filter using the appropriate wrench:
 - a. Apply the wrench as close to the filter base as possible.
 - b. Use towels to handle hot oil filters.



Right is tight; left is loose.

13. Remove the oil filter and old gasket:
 - a. Check the filter to make sure the gasket is in place.
 - b. Turn the oil filter upside down on the drain pan so that it drains.
 - c. After you complete second-party checks, dispose of the filter using the proper method.

TIPS:

- Be careful that the wrench does not touch the starter wires — you could accidentally cause sparking or short out the wires, damaging the electrical system.
- Use a cup wrench or a claw-shaped (removal only) wrench.
- Make sure the strap wrench is turned away from the starter.

14. Lubricate the gasket on the new filter using new oil:
 - a. Inspect the gasket for damage and dirt.
 - b. Lubricate with your finger only, double checking for dirt and damage.
15. Hold the oil filter up so the top-side technician can see it, and request a visual check.

CALL OUT: “(Oil filter #) check, Bay__?”

16. Wait for top-side technician to visually check the filter and call back “(Oil filter #) checked, Bay__!” Once the visual check with the top-side technician is completed, the filter should be installed immediately.

17. Check for a double gasket:
- Run your finger from the oil filter stud to the outside of the base plate, even if you can see the base plate.

SAFETY:

- **The oil filter base plate is hot and can be sharp!**
- **Make sure that the old gasket is not hanging from the stud.**
- **Check that the oil filter stud isn't loose.**
- **Be careful not to drag any dirt onto the base plate.**

CALL OUT: “(Oil filter #) going on, Bay__!”

18. Install the new oil filter:
- After the gasket contacts the base plate, use the filter band or cup wrench to tighten $\frac{3}{4}$ to 1 full turn (see the tips below)
 - DO NOT over-tighten.

TIPS:

- Some diesel and Chevrolet oil filters require more than one full turn. See side of the filter for exact tightening instructions.
- For top side canister filters with two retaining nuts, see your Service Center Manager.
- Be sure to check condition of canister studs.
- For bottom-side canister filters with retaining center bolt, see your Service Center Manager.

- For hard-to-reach filters, you may request second party check immediately.
- Be careful when changing plastic cartridge-type oil filters
 - Replace gasket or O-ring every time; they have a tendency to crack.
 - Always check to make sure the gasket or O-ring is properly seated.



Do NOT use a claw or filter pliers to tighten the oil filter; it may damage it.

CALL OUT: “(Oil filter #) tight, Bay__!”

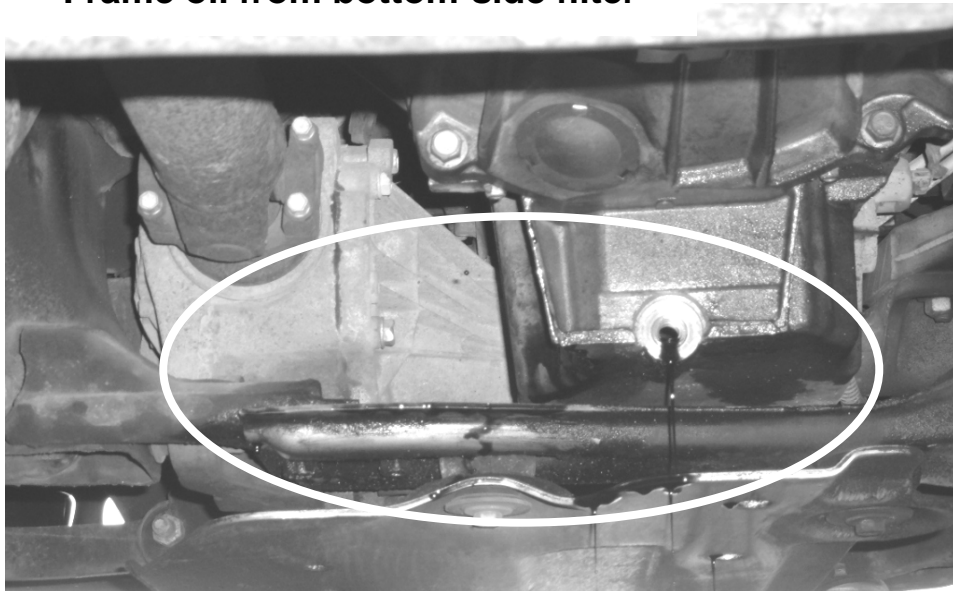
19. Use a shop towel to wipe off the new oil filter and any excess oil that may have dripped onto the engine, oil pan, or frame when the filter was removed. The photos will help you identify where you might find frame oil.

DO NOT attempt to clean oil from a vehicle with water or windshield washer solvent. Washer fluid is combustible and would create a safety hazard when mixed with oil. Additionally, neither water nor windshield washer fluid are effective in washing away oil because they do not contain detergent. Spraying the frame with water or washer fluid only creates a larger mess.

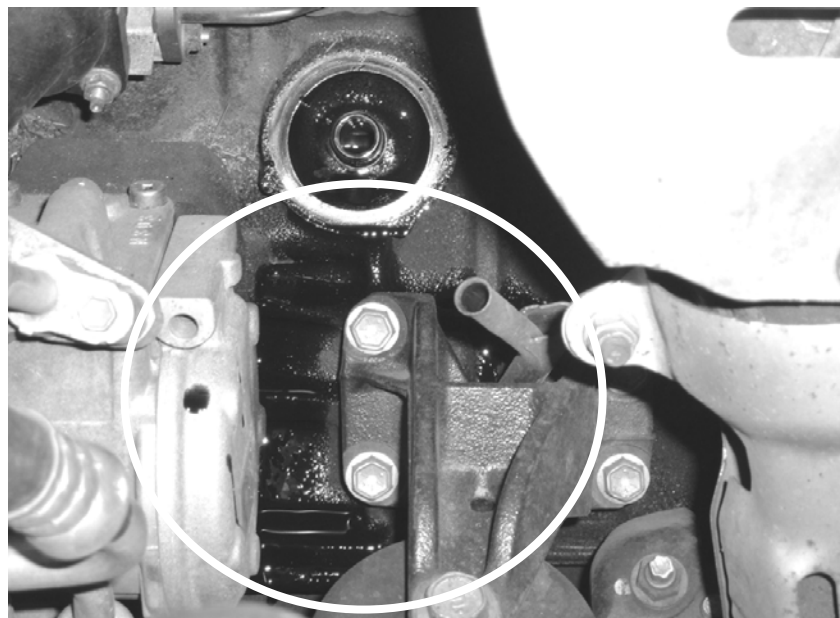


If you leave oil on the frame, the guest might think the plug or filter is leaking. *(This is a major reason for guest complaints!)*

Frame oil from bottom-side filter



Frame oil from a top-side filter



20. Install the drain plug, and immediately tighten with the proper wrench:
 - a. DO NOT finger-tighten.
 - b. DO NOT over tighten because you can:
 - Strip the plug or pan
 - Crack the gasket
 - Split the pan
 - Cause leaks
 - c. Use caution not to cross-thread.

<p>TIPS: Other types of drain plugs you may have to work on include:</p> <ul style="list-style-type: none"> • Honda OEM gasket should be replaced at each oil change • Toggle plug <ul style="list-style-type: none"> ○ Hand tighten only ○ Do not over tighten ○ Do not use on shallow pans or Volkswagens
--

CALL OUT: “Drain plug tight; ready for oil, Bay__!”

21. Conduct the second-party check:
 - a. Do not conduct the second party check unless the top-side Technician observes you performing the following:
 - Hold the proper wrench on all bottom-side units you serviced until the top-side Technician responds “Check”.
 - During the second-party check, do not further tighten plugs. This could cause them to strip.
 - Check oil filter.

CALL OUT: “(Oil filter #) tight!”

- Check oil drain plug.

CALL OUT: “Drain plug tight!”

CALL OUT: “No frame oil!”



Second party checks are only to confirm plugs are in and tight. Do NOT over tighten!

The frame oil call out is to confirm that frame oil has been thoroughly cleaned before the vehicle leaves the bay. Frame oil is not acceptable on any vehicle.

Make the skid plate call out if applicable. Use the same call out for a trap door.

CALL OUT: “(#) fittings lubed!”

22. Show the top-side Technician the old filter and gasket.
23. Step off the catwalk and stand clear when the top-side Technician calls out, “Clear for zoom, Bay__!”

CALL OUT: “Clear, Bay__!”

24. Step back on the catwalk after the car has been running for 3 seconds.
25. Without standing directly under the oil filter, check for leaks around the oil filter and oil drain plug.

CALL OUT: “Good to go, Bay__!”

26. Once it has been established that there are no leaks around the oil filter or oil drain plug, replace the skid plate following these steps:
 - a. Have technician hold the skid-plate in place while you install the fasteners.
 - b. Start all of the fasteners with your fingers and dip them in oil prior to tightening with a wrench.
 - c. Tighten all fasteners using socket or other appropriate tool.
 - d. Be sure not to over tighten any of the fasteners.
 - e. Let top-side know skid plate is secure with the call out, “Skid plate secure, Bay __!”



If fasteners are missing from the skid plate and you have a matching fastener in inventory, simply use that to secure the skid plate.

If you do not have a fastener in inventory you may, AS A LAST RESORT, use a zip tie to secure the skid plate. You may ONLY do this after informing the customer that this is necessary. Be sure to trim the tail from the zip tie once secure.

It is never an option to leave the skid plate unsecured.

CALL OUT: “Skid plate secure, Bay__!”

27. Return pit cover to fully closed position.

SAFETY: Some pit covers come equipped with a latch. If the covers in your store are equipped with a latch, it should be secure before you make your call out. The yellow, Devon-style pit covers must be touching end-to-end, completely flat, and not overlapping to be closed correctly.

CALL OUT: “Pit cover closed, Bay__!”

SAFETY: Stand off the catwalk as the vehicle exits the bay!



Task 2: Maintain Bottom-Side Service Area

1. Make sure the bottom-side service area is kept clean, neat, and well organized at all times.
2. Wipe up spills immediately.
3. Empty trash barrels as often as possible during the day.
 - a. Wipe them down regularly to eliminate oil streaks and runs.
4. Wipe down and replace tools immediately after each use.
5. Drain all used oil filters, and dispose of properly.
6. Sweep and clean the floor, as necessary. (Keep the floor free of oil and other safety hazards.)
7. Spot-clean the walls, as necessary.
8. Inspect catwalk regularly.
9. Inspect, empty, and maintain catch systems.
10. Wipe down rolling drain pans regularly.
11. Stock bottom-side products as needed.
12. Drain rolling pans.
13. Keep floor drains/screens clean and free of debris.
14. Check tool and equipment condition for potential safety problems.
15. Clean and re-grease pit cover rails as needed.
16. Clean and maintain bump caps, safety glasses, burn sleeves, and gloves. Ask your manager for replacements, if necessary.



Test Your Knowledge: Bottom-Side Test

Before you meet with your trainer, take a moment to test your SuperPro 10 knowledge. Follow the steps below to take the **Bottom-Side** test.

Once you have completed the test print the last page that includes your results to give to your trainer during your next training meeting.

Accessing the Course:

Follow the instructions below to access the **Bottom-Side Test** course:

1. In the Address line of your internet browser, enter **www.learnvalvoline.com**.
2. Enter the user name and password provided by your manager.
3. Click the **Login** button. The VIOC University home page displays.

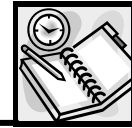
Taking the Course:

To take the course:

1. Click the **Technician** header to see available technician-level courses and tests.
2. Click the course title **Bottom-Side Test**. The course description displays.
3. Click the **Take Course** button. The course launches.
4. Take the course and close the course window.
5. To end your session in VIOC University On-line, click the **Logout** button located in the top right corner of your screen.



Meet with Your Trainer 3



1. Note in the space provided any questions you may have about what you have read, and record the Trainer's answers to those questions.

2. Answer the Trainer's questions about what you have just read.
3. Observe the Trainer performing bottom-side service tasks. (Use the "Bottom-Side OBSERVE/DO/CERTIFY Checklist" which begins on the next page.)
4. Do these same tasks yourself while the Trainer observes and offers help. The Trainer will also use the "Bottom-Side OBSERVE/DO/CERTIFY Checklist" to check off your progress.
5. Ask your Trainer the following questions. Record your answers in the space provided.

- **What is VIOC's free fluid refill service? How do I do this work?**

- **What are the hazards of checking a Ford aluminum transfer case?**

- **What type of oil drain plug gasket do we replace with every oil change?**

- **What type of vehicle has a transaxle, and which has a transmission?**

- 6. Date and initial the Progress Chart at the front of the manual. (Be sure your Trainer initials it also.) Then set a time for your next meeting on the line below:**

(date/time)



Bottom-Side OBSERVE/DO/CERTIFY Checklist

Watch your Service Center Manager (or assigned Trainer) demonstrate the following activities. After he or she demonstrates an activity, check it off in the Observe column. Then perform the same activities as the Service Center Manager observes and offers help. (After you perform an activity satisfactorily, your Trainer will check it off in the Do column.) Be sure to take notes on any procedures you feel will help you carry out these responsibilities in the future. The Certify column will be used to note that you have performed the service procedure perfectly and that you are now certified as a Super-Pro Technician.

Task 1: Perform Bottom-Side Basic Service

Activity	Observe	Do	Certify
1. Stand off the catwalk as the vehicle enters the bay.	_____	_____	_____
2. Wait for the top-side Technician to call out: "Showtime, Bay__!"	_____	_____	_____
3. Put safety glasses, bump hat and gloves on.	_____	_____	_____
4. Unlatch and pull back pit cover.	_____	_____	_____
5. If the vehicle has a skid plate, CALL OUT: "Skid plate, Bay__!"	_____	_____	_____
6. Inspect the underside of the engine compartment vehicle to make sure everything looks all right. If something is wrong notify the keyholder in charge immediately. Check for:	_____	_____	_____
<ul style="list-style-type: none"> • Damage and dents to the oil pan. • Leaks around the oil plug, oil filter or anywhere under the vehicle. • Damaged skid plates • Missing skid plate fasteners. 			

Activity	Observe	Do	Certify
7. If the vehicle has a skid plate, remove the skid plate or open the “trap door” to access the oil filter.	_____	_____	_____
8. Wipe off and lubricate the following components, if applicable, on the chassis/driveline: <ul style="list-style-type: none"> • Upper ball joints • Lower ball joints • Outer tie rod ends • Inner tie rods ends • Idler arm • Pitman arm • U-joints • Slip yolk (drive shaft splines) 	_____	_____	_____
9. CALL OUT: “(#) fittings lubed, Bay__!”	_____	_____	_____
10. Repeat the oil filter number back to top-side technician/CSR. CALL OUT: “(Oil filter #), Bay__!”	_____	_____	_____
11. Make sure that the oil filter is in stock.	_____	_____	_____
12. Take frame oil preventative measures if necessary.	_____	_____	_____
13. Slide the rolling drain pan in position to catch the draining oil.	_____	_____	_____
14. Remove the oil drain plug, using the proper wrench.	_____	_____	_____
15. Check the head, threads, and gasket of the drain plug.	_____	_____	_____
16. Place the plug and wrench on the drain pan.	_____	_____	_____
17. CALL OUT: “Drain plug looks good, Bay__!”	_____	_____	_____

	Activity	Observe	Do	Certify
18.	While oil is draining, loosen the oil filter using the appropriate wrench.	_____	_____	_____
19.	Apply the wrench as close to the filter base as possible.	_____	_____	_____
20.	Use towels to handle hot oil filters.	_____	_____	_____
21.	Remove the oil filter and old gasket.	_____	_____	_____
22.	Check the oil filter to make sure that the gasket is in place.	_____	_____	_____
23.	Turn the oil filter upside down on the drain pan so that it drains.	_____	_____	_____
24.	Lubricate the gasket on the new filter using new oil.	_____	_____	_____
25.	Request top-side to visually check the oil filter number.	_____	_____	_____
26.	CALL OUT: “(Oil filter #) check, Bay__?”	_____	_____	_____
27.	Check for a double gasket, running finger from the oil filter stud to the outside of the base plate.	_____	_____	_____
28.	CALL OUT: “(Oil filter #) going on, Bay__!”	_____	_____	_____
29.	Install the new oil filter.	_____	_____	_____
30.	Use the filter wrench to tighten $\frac{3}{4}$ to 1 full turn, after the gasket contacts the base plate.	_____	_____	_____
31.	CALL OUT: “(Oil filter#) tight, Bay__!”	_____	_____	_____
32.	Wipe off the new oil filter and any excess oil that may have dripped onto the engine, oil pan, or frame when the filter was removed.	_____	_____	_____
33.	Install the drain plug, and immediately tighten with the proper wrench.	_____	_____	_____

	Activity	Observe	Do	Certify
34.	CALL OUT: “Drain plug tight; ready for oil, Bay__!”	_____	_____	_____
35.	Conduct the second check with the Top-Side Technician observing you perform the check.	_____	_____	_____
36.	Check oil filter.	_____	_____	_____
37.	CALL OUT: “(Oil filter #) tight!”	_____	_____	_____
38.	Check oil drain plug.	_____	_____	_____
39.	CALL OUT: “Drain plug tight!”	_____	_____	_____
40.	CALL OUT: “No frame oil!”	_____	_____	_____
41.	CALL OUT: “(#) fittings lubed!”	_____	_____	_____
42.	Show the top-side Technician the old filter and gasket.	_____	_____	_____
43.	Step off the catwalk and stand clear when the top-side Technician calls out “Clear for zoom, Bay__!”	_____	_____	_____
44.	CALL OUT: “Clear, Bay__!”	_____	_____	_____
45.	Count to 3 after topside technician calls out “Oil pressure, Bay __!” and after the car starts and then step back on the catwalk.	_____	_____	_____
46.	Check for leaks around the oil filter and oil drain plug. Do not stand directly underneath the filter.	_____	_____	_____
47.	CALL OUT: “Good to go, Bay__!”	_____	_____	_____
48.	If necessary, attach the skid plate or close the trap door. CALL OUT: “Skid plate secure, Bay__!”	_____	_____	_____
49.	Return pit cover to fully-closed position.	_____	_____	_____

	Activity	Observe	Do	Certify
50.	After servicing the vehicle, dispose of the filter using the proper method.	_____	_____	_____
51.	Make sure tools are wiped off and put away.	_____	_____	_____
52.	CALL OUT: "Pit cover closed, Bay__!"	_____	_____	_____
53.	Stand off the catwalk as the vehicle exits.	_____	_____	_____

Task 2: Maintain Bottom-Side Service Area

	Activity	Observe	Do	Certify
1.	Make sure the bottom-side service area is clean, neat, and well-organized.	_____	_____	_____
2.	Wipe up spills.	_____	_____	_____
3.	Empty and wipe down trash barrel.	_____	_____	_____
4.	Wipe down and replace tools after use.	_____	_____	_____
5.	Drain used oil filters and dispose of properly.	_____	_____	_____
6.	Sweep and clean the floor.	_____	_____	_____
7.	Spot-clean the walls.	_____	_____	_____
8.	Inspect the catwalk.	_____	_____	_____
9.	Inspect, empty, and maintain catch systems.	_____	_____	_____
10.	Wipe down rolling drain pans.	_____	_____	_____
11.	Stock bottom-side products.	_____	_____	_____
12.	Drain rolling pans.	_____	_____	_____
13.	Clean floor drains and keep them free of debris.	_____	_____	_____

	Activity	Observe	Do	Certify
14.	Check condition of tools and equipment.	_____	_____	_____
15.	Clean and re-grease pit cover rails as needed.	_____	_____	_____

Bottom-Side Call Outs

“Skid Plate, Bay__!” (if applicable)

“(#) fittings lubed, Bay__!”

“(Oil filter #), Bay__!”

“Drain plug looks good, Bay__!”

“(Oil filter #) check, Bay__?”

“(Oil filter #) going on, Bay__!”

“(Oil filter #) tight, Bay__!”

“Drain plug tight; ready for oil, Bay__!”

“(Oil filter #) tight!”

“Drain plug tight!”

“No frame oil!”

“(#) fittings lubed!”

“Clear, Bay__!”

“Good to go, Bay__!”

“Skid Plate Secure, Bay__!” (if applicable)

“Pit cover closed, Bay__!”

Part 4: Introduction to the Point-of-Sale System

Overview

In this part, you'll learn some important basics of using the POS (Point-of-Sale) System.

You'll use the POS System to:

- Record guest and vehicle information
- Perform guest service functions



Before you begin working on the POS System, check with your Service Center Manager to make sure he has contacted the Help Desk to add your name to the employee file on the computer. In addition, you'll need a password to access the system. The password can be any set of letters or numbers, from four to no more than 10 characters. This password must be kept CONFIDENTIAL to maintain the system security.



Guest Service Functions

As a Super-Pro[®] Technician, you will occasionally be responsible for helping the guest by entering their information to print a work order, or entering vehicle service information. As you advance further into Senior Technician training, you will have the opportunity to learn the rest of the invoicing process.

You have already learned how to enter and record guest information into the POS. You can refer back to the pages regarding information on this process. However, there are some things in the POS system that your trainer can show you to make guest service functions easier for you.

Have your trainer show you:

- The two types of invoices you will use at your service center
- How to update a maintenance check status
- How to delete maintenance checks from the invoice
- How to print a work order

If you have any questions while they show you these functions, be sure to ask your trainer for clarification. Utilize the help screens on the POS system for the different functions, as necessary.

The POS System OBSERVE/DO/CERTIFY Checklist

Watch your Service Center Manager (or assigned Trainer) demonstrate the following on the POS System. After he or she demonstrates an activity, check it off in the OBSERVE column. Then perform the same activities as the Service Center Manager observes and offers help. After you perform an activity satisfactorily, check it off the DO column. Be sure to take notes on any procedures you feel will help you carry out these responsibilities in the future. The Certify column will be used to note that you have performed the POS system procedures perfectly and you are now certified as a Super-Pro[®] Certified Technician.

Activity	Observe	Do	Certify
<i>Time In/Out into POS</i>			
1. Time in to the POS System.	_____	_____	_____
2. Time out of the POS System.	_____	_____	_____
<i>Entering vehicle and guest information</i>			
1. Access Vehicle Status Screen.	_____	_____	_____
2. Scan the VIN.	_____	_____	_____
3. Enter guest information.	_____	_____	_____
For a new guest			
<ul style="list-style-type: none"> • Select title • Enter First Name • Enter Last Name • Enter Address • Enter Zip Code • Enter City and State • Enter Phone Number • Enter Email Address 			
4. Enter vehicle information.	_____	_____	_____
For a new or returning guest			
<ul style="list-style-type: none"> • Enter VIN 			
5. Enter Invoice information.	_____	_____	_____

Activity	Observe	Do	Certify
For a new guest			
<ul style="list-style-type: none"> • Enter State and License Plate • Enter Current Mileage • Enter Driver's Name • View, enter, or edit comments 			
For a returning guest			
<ul style="list-style-type: none"> • Enter PMT number 			
6. If Fleet guest, verify Fleet information.	_____	_____	_____
7. "Move" vehicle to appropriate bay.	_____	_____	_____
<i>Entering vehicle service information</i>			
1. Access Chek-Chart Menu.	_____	_____	_____
2. Record Visual Inspection information.	_____	_____	_____
3. Present Service Recommendations.	_____	_____	_____
4. Select Services.	_____	_____	_____
5. Generate Work Order.	_____	_____	_____
6. Print Vehicle Work Order.	_____	_____	_____

Part 5: VIOC Product Information



Learn On-Line: Lubrication Basics

Go to the LMS and take the *Lubrication Basics* course. In this course you will learn the following:

- Introduction to the need for lubricants, the functions of motor oil in engines, and what happens when lubricants don't do their job.
- Properties of motor oil, the role of additives and the organizations that are involved in motor oil standards and testing.
- The manufacturing process of motor oil.

Accessing the Course:

Follow the instructions below to access the *Lubrication Basics* course:

1. In the Address line of your internet browser, enter **www.learnvalvoline.com**.
2. Enter the user name and password provided by your manager.
3. Click the **Login** button. The VIOC University home page displays.

Taking the Course:

To take the course:

1. Click the **Technician** header to see available technician-level courses and tests.
2. Click the course title *Lubrication Basics*. The course description displays.
3. Click the **Take Course** button. The course launches.
4. Take the course and close the course window.
5. To end your session in VIOC University On-line, click the **Logout** button located in the top right corner of your screen.

Learn On-Line: Developing Motor Oil

This module provides information about the process for engineering motor oil. It also explores the various tests used to certify automotive lubricants.

Follow the directions described above and select *Developing Motor Oil* to take the course.

When you have completed the course, print the last page and give to your trainer during your next training meeting.



Valvoline[®] Motor Oil

All cars require motor oil to run, but the choice of motor oil can make a significant difference in the performance and engine life of a car. Motor oil is used to reduce friction between metal parts in the engine.

The better an oil reduces friction, the better it:

- Reduces engine wear
- Increases fuel economy
- Achieves high performance

Most motor oils today are formulated to reduce friction over a wide range of temperatures.

An effective motor oil:

- Won't break down when the engine gets hot
- Won't thicken and make the engine hard to start when it's cold

Different kinds of driving place different demands on a motor oil. Although even normal driving will "use up" a motor oil, extreme conditions can greatly shorten an oil's useful life in the engine.

An effective motor oil provides reserves of protection in case of extreme driving conditions such as:

- Frequent starting
- Stop-and-go driving
- Short trips
- High engine temperatures
- Heavy loads
- Low starting temperatures

We have seven types of Valvoline motor oil. It's important that you know how these oils best meet the needs of your guests and the type of driving conditions they experience. Each of these Valvoline motor oils has unique properties, as explained below.

Valvoline's SynPower[®] motor oil is designed for high performance vehicles and vehicles driven under the toughest conditions. It is a fully synthetic motor oil which provides the best reduction of friction, giving your engine increased horsepower, increased fuel economy, better wear protection at start up, cooler engine temperature, and increased overall performance for any car.

Valvoline's MaxLife Synthetic[®] motor oil is designed for high performance vehicles and vehicles driven under the toughest conditions that have over 75,000 miles. In addition to the advantages of a full synthetic motor oil, it contains special seal conditioners and cleaners to reduce leaks, deposits, and sludge buildups common in higher-mileage engines.

Valvoline Premium Blue[®] gives guests with diesel vehicles heavy-duty protection and performance. The semi-synthetic engine oil provides premium diesel protection by providing advanced soot control, cold-start protection, and reducing oil filter restriction at high soot levels. The balanced formulation of Premium Blue helps maximize engine durability, and has been endorsed and recommended by Cummins for use in Dodge Ram Turbo Diesels.

Valvoline's DuraBlend[®] motor oil is designed for harder working engines. DuraBlend is a blend of conventional and synthetic motor oils, and provides that extra measure of protection your engine may need in tough conditions - such as towing, hauling or stop-and-go traffic.

Valvoline's MaxLife[®] motor oil is designed for higher mileage vehicles. As cars age, their engines can develop problems not found in vehicles with fewer miles. Engines lose compression, gaskets and seals shrink, rings wear, and valves don't seal tightly. This causes engine leaks, lower gas mileage and overall decline in engine performance. MaxLife is a semi-synthetic oil and gives the best protection for higher-mileage vehicles.

Valvoline All-Fleet[®] motor oil is an excellent product designed to meet the highest manufacturer and industry standards for diesel engines. It is recommended for diesel-powered vehicles operated under less severe driving conditions.

Valvoline Conventional[®] motor oil is an excellent product designed to meet the highest manufacturer and industry standards. It is recommended for cars operated under less severe driving conditions.

Motor Oil Definitions

- Viscosity:** An oil's resistance to flow at different temperatures.
- Grade:** A measure of viscosity. The higher the grade number, the greater the oil's resistance to flow. Example: A 5W-30 motor oil is less viscous (flows more easily) than 10W-30.
- Base Stock:** Makes up about 80% of quality motor oils, serving as a carrier for additives.
- Additives:** The "active ingredients" in quality motor oils, making up about 20% of the product.
- Sludge:** A gritty substance, resembling coffee grounds, which can accumulate in poorly maintained engines. Regular oil changes help to prevent sludge.

Motor Oil Designations

The donut-shaped seal of the American Petroleum Institute is found on each container of motor oil. This seal classifies and identifies the general types of oils used in automotive engines. This seal tells you the type of service the motor oil is suitable for (i.e., gasoline engine or diesel engine) and the viscosity grade.

- The letters “SAE” on the API seal stand for Society of Automotive Engineers — the group which measures the thickness or viscosity of motor oils at given temperatures. Example: SAE 5W-30 is a multigrade oil designed to have the cold flow characteristics of a 5W oil combined with the engine operating temperature viscosity of SAE 30 grade oil. The “W” indicates that the oil meets certain viscosity requirements for low temperature or winter operation.
- The designation “API Service SL” is a new service category introduced by the API and the American Automobile Manufacturers Association in 2001. SL oils supersede all previous categories and offer improved performance, including less engine sludge, varnish, and rust; less cam wear; and improved oxidation characteristics.
- The designation “API Service CH” means that the oil is approved for severe-duty diesel applications.

The starburst seal of the International Lubricant Standardization and Approval Committee (ILSAC) indicates that a motor oil satisfies tough performance criteria that focus on the ability of the oil to improve fuel economy in a vehicle. The motor oils that meet or exceed the stringent test requirements receive this mark of quality.



Questions and Answers

What is DuraBlend[®] motor oil?

Answer: *DuraBlend[®] motor oil is the semi-synthetic blend motor oil from Valvoline. This technologically advanced motor oil can add years to a car for less money than full synthetics. DuraBlend[®] oil outperforms conventional oils and costs less than full synthetics.*

What is SynPower[®] synthetic motor oil and why would my guests need it?

Answer: *Synthetic oils are man-made. Synthetic base oils are produced from either crude oil or natural gas, where ethylene is produced. The ethylene is then passed through catalysts and hydrogen to form chemically pure hydrocarbons, the chemical structures that make synthetic based oils.*

A partial synthetic is made by replacing some of the base oils with synthetic oil and combining it with additives.

Your guest might need SynPower[®] if he or she:

- *Drives under extreme conditions (heat, cold, stop-and-go, dust, dirt, etc.)*
- *Drives a high performance car*
- *Drives a high-mileage car*
- *Tows a boat or trailer*
- *Simply wants the best engine protection available*

What is MaxLife[®] motor oil and how can it benefit my guests?

Answer: *MaxLife[®] is the first performance motor oil formulated specially for higher mileage vehicles. MaxLife[®] is a blend of superior base oils and specially developed additives that benefit higher-mileage cars in four ways:*

- *Minimize oil consumption*
- *Improves fuel economy*
- *Prevents lost horsepower*
- *Protects against friction & engine wear*

When do you recommend MaxLife[®]?

Answer: *When a guest's vehicle is close to or more than 75,000 miles, or engine leaks have been noted.*

MaxLife[®] is the only oil with a seal conditioner. Why is this important?

Answer: *MaxLife[®] conditions and "swells" shrunken gaskets and seals, so they can protect against engine leaks*

SynPower[®], DuraBlend[®] and MaxLife[®] oils cost my guests more. What can they save my guests?

Answer: *SynPower[®], DuraBlend[®] and MaxLife[®] oils **do** more than conventional oils:*

- *They perform better under extreme conditions.*
- *They improve cold-weather starting and lubrication.*
- *They increase horsepower and engine efficiency by reducing friction and drag.*
- *They reduce wear on vital engine parts.*
- *They increase fuel efficiency.*

*Your guests **save** more:*

- *Fuel savings*
- *Fewer engine repairs*
- *Fewer emergency charges (cold weather start-up assistance), etc.*
- *Longer engine life*

What are the technical differences between SynPower[®] synthetic, semi-synthetic DuraBlend[®], MaxLife[®], racing, and regular petroleum-based oils?

Answer: *MaxLife[®], racing, and regular petroleum-based oils all start out the same refined from crude oil. Then, additives provide different performance characteristics. Semi-synthetics such as DuraBlend[®] motor oil use a percentage of petroleum and synthetic base stocks. Then, additive packages similar to those found in premium racing oils are added. The synthetic base provides increased performance and protection benefits.*

SynPower[®] full synthetic oils are superior oils with advantages that include: naturally high viscosity index, pour point of -80 degrees F (compared to 0 degrees for natural oils), excellent volatility characteristics, the ability to increase horsepower, and the ability to dissipate heat quicker thus allowing cooler operating temperatures.

The additives used to formulate natural engine oils are the same as those used in semi-synthetics and synthetics.

What's different about the additives in MaxLife[®]?

Answer: *MaxLife[®]'s premium additive package allows the oil to protect higher mileage engines better than any conventional oil can. Guests will enjoy these benefits:*

- *Reduced engine leaks.*
- *Better gas mileage.*
- *Improved horsepower.*
- *Better overall performance.*

Must I flush my guest's engine before switching to or from semi-synthetic DuraBlend[®] oil or SynPower[®] synthetic motor oil?

Answer: *No. In fact, you can use any conventional or SynPower[®] synthetic motor oil to top off your guest's engine.*

Will using SynPower[®] synthetic oil, DuraBlend[®] motor oil, or MaxLife[®] oil void a new car warranty?

Answer: *Not when you follow the oil and filter change intervals outlined in the Owner's Manual. (Mazda vehicles with rotary engines cannot use any synthetic-based oils or MaxLife[®].)*

Do any manufacturers prohibit using synthetic or semi-synthetic oil?

Answer: *No, provided the product meets API quality requirements. (See exceptions listed in answer above.) Valvoline[®] synthetic and semi-synthetic oils exceed API's highest quality rating: SJ/CF. These oils will not void new car warranties.*

Is using DuraBlend[®] oil or SynPower[®] synthetic oil likely to lower oil consumption?

Answer: *Yes. Conventional motor oils use hydrocarbons refined from crude oil and contain many types and sizes of molecules. The smaller molecules are most likely to be lost as oil consumption. Since synthetics are man-made, they start out as small, chemically pure hydrocarbons and are built up to one size and type that is ideal for motor oil use. Fully synthetic oil contains no "smaller" molecules so oil consumption is likely to be measurably less.*

Will oil pressure be affected by SynPower[®] synthetic, DuraBlend[®] semi-synthetic oil, or MaxLife[®] oil?

Answer: *One should not see any oil pressure change if the same viscosity of oil is used.*

What are the maximum oil change intervals for SynPower[®] synthetic, DuraBlend[®], and MaxLife[®]?

Answer: *Whether it is synthetic or petroleum-based oil, it is the additives that wear out. Car manufacturers do not differentiate between synthetics and regular motor oil regarding drain intervals. Manufacturers recommend specific drain intervals, depending on driving habits. These recommendations should be followed for all conventional, semi-synthetic and synthetic oils.*

Can SynPower[®] synthetic, DuraBlend[®], and MaxLife[®] oils be used in new cars?

Answer: *Absolutely.*

Can SynPower[®] synthetic oil, DuraBlend[®] oil, and MaxLife[®] oil be used in older cars?

Answer: *Both Valvoline[®] DuraBlend[®] oil and SynPower[®] synthetic oil can be used in cars built after 1980. Cars built prior to 1980 have seal and gasket material, which may not be compatible with synthetics. This may cause seal and gasket damage, which may cause oil leaks. However, semi-synthetic DuraBlend[®] oil has just the right amount of synthetic oil in its formula so as not to be harmful to seals or gaskets in pre-1980 vehicles — another advantage to using DuraBlend[®] oil.*

MaxLife[®] is an excellent choice here. If the car has over 75,000 miles (any model year), or has engine leaks, the guest will benefit by using MaxLife[®].

Is DuraBlend[®] oil or synthetic oil more likely to leak in older cars?

Answer: *No. If the engine already leaks conventional oil, it will leak synthetic as well. If the engine does not leak now, it is no more likely to leak synthetic or semi-synthetic.*

Can I put SynPower[®] synthetic oil, DuraBlend[®] oil or MaxLife[®] oil in a diesel engine?

Answer: *Yes & No – Yes, semi-synthetics and synthetics perform well in diesels (except turbo diesels). Again, be sure to follow recommended oil and filter change intervals.*

No, MaxLife[®] has not yet been tested for performance in diesel engines.

How do SynPower[®] synthetic, DuraBlend[®] semi-synthetic, and MaxLife[®] oils affect turbo engines?

Answer: *Semi-synthetic and SynPower[®] synthetic oils are excellent for turbocharged engines. Valvoline[®] DuraBlend[®] oil and Valvoline[®] High Performance Synthetic oils are turbo approved oils.*

MaxLife[®] is an excellent choice for use in higher-mileage turbocharged engines.

Does using semi-synthetic DuraBlend[®] oil or SynPower[®] synthetic oil improve gas mileage?

Answer: *Yes. Dynamometer testing shows an increase in fuel economy with synthetic oils. In addition, Valvoline[®] DuraBlend[®] oil 5W-30 and 10W-30 are rated EC-II for their increased fuel efficiency.*

Why use SynPower[®] synthetic, semi-synthetic DuraBlend[®], or MaxLife[®] oils if my guest needs to change oil just as often as before?

Answer: *Synthetics and MaxLife[®] provide the best performance and protection. Some car owners simply prefer the best. Your guest's driving habits determine whether they need a synthetic, semi-synthetic, or quality petroleum-based oil. Synthetic oil becomes dirty and additives break down at the same rate as conventional oils.*

Are DuraBlend[®] oils or SynPower[®] synthetic motor oils really better at reducing friction?

Answer: *Synthetic motor oils reduce friction many times more than even premium conventional motor oils. In fact, many drivers say that after switching from regular oil to synthetic, they immediately see an increase in rpm on their tachometers.*

Can you mix synthetic oil and conventional oil?

Answer: *Yes. Valvoline[®] synthetic oils and MaxLife[®] are fully compatible with natural petroleum products.*



VIOC Fuel System Treatment

The VIOC Fuel System Maintenance Program is a complete system that is designed to clean a dirty fuel system **and** maintain the fuel system once it is clean. The program consists of a SynPower[®] product that is used at specific mileage recommendations to maximize its fuel system cleaning properties, and to give maximum fuel system protection.

Valvoline[®] Professional Series Entire Fuel System Cleaner

- Cleans vital areas of the engine that can't be cleaned with "pour-in" products
- Restores maximum power and performance to the engine
- Eliminates rough idle, hesitation, and knocking
- Reduces emissions caused by deposits
- Restores engine efficiency and economy

Valvoline[®] Professional Series Entire Fuel System Cleaner is a three-step professional service designed to clean the entire fuel system, including fuel injectors, intake valves and combustion chambers, plus instantly dissolve throttle body deposits.

Features and Benefits of Valvoline Professional Series Fuel System Treatments

Feature	Benefit
Simply put VPS fuel system treatments in the tank and fill up with gasoline. VPS fuel system treatments effectively clean the fuel intake system while you drive.	VPS fuel system treatments are convenient and easy to use.
VPS fuel system treatments contain no alcohol.	VPS fuel system treatments will not damage seals and gaskets throughout the fuel intake system.
VPS fuel system treatments will not harm the catalytic converter or the oxygen sensor.	VPS fuel system treatments won't create problems in the exhaust system while improving the performance of the fuel intake system.
VPS fuel system treatments clean the entire fuel intake system, including combustion chambers, valves, fuel injectors, intake ports, intake manifolds, and carburetors.	VPS product addresses unique needs at specified mileage intervals.
VPS fuel system treatments remove dirt and deposits from the fuel intake system.	VPS fuel system treatments improve most aspects of engine performance, including drivability, economy, and power.



Test Your Knowledge: Product Information Test

Before you meet with your trainer, take a moment to test your SuperPro 10 knowledge. Follow the steps below to take the **Product Information** test.

When you have completed the course, print the last page and give to your trainer during your next training meeting.

Accessing the Course:

Follow the instructions below to access the *Product Information Test* course:

1. In the Address line of your internet browser, enter **www.learnvalvoline.com**.
2. Enter the user name and password provided by your manager.
3. Click the **Login** button. The VIOC University home page displays.

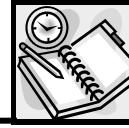
Taking the Course:

To take the course:

1. Click the **Technician** header to see available technician-level courses and tests.
2. Click the course title ***Product Information Test***. The course description displays.
3. Click the **Take Course** button. The course launches.
4. Take the course and close the course window.
5. To end your session in VIOC University On-line, click the **Logout** button located in the top right corner of your screen.



Meet With Your Trainer 4



1. Ask any questions you may have about what you have read.

2. Answer the Trainer's questions about what you have just read.
3. Ask your Trainer the following questions. Record your answers in the space provided.

- **What is the name of the Valvoline[®] fully synthetic motor oil?**

- **What is the name of the Valvoline[®] semi-synthetic motor oil?**

4. **Date and initial the Progress Chart at the front of the manual. (Be sure your Trainer initials it also.) Then set a time for your next meeting on the line below:**

(date/time)

Part 6: Additional Services Procedures

Task:

1. Perform coolant replacement service.
2. Perform differential/manual transmission/transfer case drain and fill service.
3. Perform automatic transmission service.
4. Perform serpentine belt replacement.
5. Perform tire rotation.
6. Perform VPS entire fuel system cleaning.
7. Perform air conditioning system check and re-charge.
8. Perform battery replacement

As you study the additional service procedures, be sure to note any questions that you may have on the Meet with Your Trainer 7 page and ask them during your meeting with the Trainer at the end of this chapter.



Before performing any additional services, make sure you are wearing your required PPE.



Not every location offers all of the above listed services. See your Service Center Manager for the services your location offers.



Bay__ is used as an example throughout this manual; you would call out “Bay 1”, “Bay 2”, “Bay 3”, or “Bay 4” depending on the bay you’re working in at the time.



Task 1: Perform Coolant Replacement Service



Need for Speed Tip

Coolant services are to be performed on the lot whenever staffing and weather permit.

Coolant replacement may be performed in conjunction with the following services:

- Light replacement
- Air filter
- Tire Rotation
- Serpentine belt replacement
- Wiper blades
- Battery replacement (with jump box)
- A/C service
- Differential/Manual transmission/transfer case service

Radiator flush may not be performed during:

- Automatic transmission service
 - Entire fuel system treatment
1. Before you begin:
 - Make sure you have your required PPE on
 - Prepare the flush machine
 2. Turn off the vehicle.
 3. Before opening the radiator cap, squeeze the upper radiator hose:

CALL OUT: “Clear for Cooling System Service, Bay__!”

- If too hot or pressure is too great:
 - Start the vehicle
 - Wait 30 seconds or more
 - Turn off the vehicle
- 4. Remove radiator cap carefully using the six-finger method and towel.

SAFETY Use extreme caution when vehicles are hot:

- **Coolant can cause burns**
 - **Radiators under pressure can spray hot antifreeze.**
-

5. Remove cap from overflow container.
6. Attach the wand to the black hose. Close the valve.
7. Turn control valve to LOWER RADIATOR & OVERFLOW.
8. Press bottom of LOWER RADIATOR & OVERFLOW selector switch to turn on the pump.
9. Use the wand to empty the overflow container and lower the level of the coolant in the radiator to just below the upper radiator hose. Open the valve as needed to drain the fluid.
10. Press bottom of LOWER RADIATOR & OVERFLOW selector switch to turn off the pump.
11. Replace the caps on the radiator and overflow container.



The MCX-1 Cooling System Flush Machine can be connected at the radiator or engine depending on whichever is the easiest to get to.

12. Disconnect the upper radiator hose from either the engine or the radiator.
13. Select an adapter hose with the same inner diameter as the radiator hose, and connect at the point the radiator was disconnected using a clamp.
14. Install step adapters in the adapter hose and the radiator hose using clamps. Make sure the outside diameter of the step adapters is the same as the inner diameter of the radiator hose.
15. Connect the green and black hoses from the MCX-1 to the two (2) step adapters. See **note on special hookups below**.



Some cooling systems will require special hookups to complete the coolant replacement procedures.

Special Hookup 1:

It may be necessary to reverse the hoses during the coolant replacement procedure on systems with a reverse-connected thermostat. See **note** after step # for the clues to this situation on the vehicle.

Special Hookup 2:

Some cooling systems do not have a cap on the radiator. Instead, there is a single cap on the overflow tank. The hoses to and from the overflow tank must be pinched off using hose-pinching pliers during the coolant replacement procedure. Failure to pinch these hoses will cause fluid to be forced out of the vented cap on the overflow tank during the coolant replacement procedure.

16. Determine the correct capacity and type of coolant for the vehicle's cooling system.

17. Make sure the new coolant tank is (left slot on front) is filled with the correct coolant and at a level higher than the amount required to fill the cooling system to full capacity.



The MCX-1 Coolant Replacement Machine must be filled with a 50/50 water/coolant mix in order to achieve the correct protection level for the vehicle's cooling system.

18. Check the waste tank (right slot on front) to make sure the level is low enough to accept the full amount of coolant in the vehicle's cooling system.



Need for Speed Tip

Always be sure to check/ replenish your stock of extra hose clamps after each service.

SAFETY DO NOT START VEHICLE with this type of flush machine.

19. Turn the control valve to EXCHANGE COOLANT.
20. Press the top of EXCHANGE COOLANT OR FILL RADIATOR & OVERFLOW selector switch to turn on the pump.
21. Watch the level of coolant as it lowers in the new coolant tank. Press the bottom of the EXCHANGE COOLANT OR FILL RADIATOR & OVERFLOW selector switch when it reaches the correct level. This stops the transfer of coolant.

TIPS:

If the pump is running, and the new coolant level does not go down, try reversing the connections of the green and black hoses.

22. Close the valves on the step adapters.
23. Disconnect the black and green hoses from the step adapters.
24. Install wand on black hose. Close the valve.
25. Turn control valve to LOWER RADIATOR & OVERFLOW.
26. Press top of LOWER RADIATOR & OVERFLOW selector switch to turn on the pump.
27. Use the wand to lower the level of coolant in the radiator to a level just below the upper hose where the step adapter is attached. Open the valve on the wand as required.
28. Remove all hoses, reattach the radiator hose, and remove the overflow cap.
29. Install the wand on the green hose and turn control valve to FILL RADIATOR & OVERFLOW. Press the top of the EXCHANGE COOLANT OR FILL RADIATOR & OVERFLOW selector switch, turn on the pump, and fill the radiator and overflow to proper levels.

30. Replace radiator and overflow caps.
31. Press bottom of EXCHANGE COOLANT OR FILL RADIATOR & OVERFLOW selector switch, and disconnect the power cord.
32. Have the guest sit in their vehicle and start it.
 - If the guest is not available, start it yourself. Make sure both feet are in vehicle. **Be sure you sit in the vehicle with your foot on the brake before starting!**



Make sure that your hands and uniform are clean, and that there are no tools in your pockets.

CALLOUT: “Clear for zoom, Bay__!”

33. Be sure that the thermostat opens, and that coolant is circulating properly through system, by visually checking the flow in the radiator neck.
34. Ask a coworker to conduct a second-party check.
35. Ask the guest to stop back in a couple of days so you can check for proper level and protection.
 - Write the R5 code on the work order for the CSR – “RETURN FOR FLUID LEVEL CHECK NEXT DAY.”



Need for Speed Tip

Always Re-fill fresh antifreeze tanks and empty waste during next available down time after service. This will ensure a timely service on the next flush.

ENVIRONMENTAL NOTES:

Follow these environmental guidelines when performing cooling system service.

1. Use a collection pan to collect antifreeze that drips from a vehicle that is connected to the flush machine.
2. Place the drippings from this pan in the spent antifreeze tank or drum.



A waste antifreeze manifest must be maintained at the Service Center for three years. Check with your Service Center Manager about the appropriate method of draining coolant.



Task 2: Perform Differential/Manual Transmission/Transfer Case

Drain and Fill Service

- Light replacement
- Air filter
- Serpentine belt replacement
- Wiper blades
- Battery replacement
- A/C service
- Automatic transmission service
- Entire fuel system treatment
- Oil change

Differential/manual transmission service may not be performed in conjunction with the following services:

- Tire rotation

CALL OUT: “Differential/Manual transmission service Bay__!”

1. Before you begin:
 - a. Make sure that the proper fluid for the vehicle is in stock.
 - b. If you're unsure of the proper fluid to add:
 - i. Check the owners manual or the Chek-Chart Gearbox Fluid Service Guide
 - ii. Ask the topside Technician or Service Center Manager.
2. Check differential/manual transmission for leaks.
 - a. Do NOT change severely leaking units.
3. Remove the check plug:
 - a. Inspect head, threads, and gasket.
 - b. Replace a worn or damaged check plug or gasket.
4. Remove drain plug, if equipped:
 - a. Inspect head, threads, and gasket.
 - b. Clean drain plug of all metal filings.
 - c. Allow gearbox to drain completely.
 - d. Replace a worn or damaged drain plug or gasket.



NEVER remove a drain plug before first removing the check plug

5. If there is no drain plug:
 - a. Connect evacuator to air line.
 - b. Insert tube through check plug to bottom of unit. OR
 - c. Use a suction gun.
6. Evacuate old fluid until evacuator draws air only.
 - a. Move the bottom of the hose around and to the lowest point of the gear box in order to extract all of the fluid.
7. Reinstall the drain plug with the proper wrench.
8. Fill with proper fluid to within ¼ inch of check plug hole:
 - a. This will allow for expansion, as fluid warms.
 - b. DO NOT overfill.
9. Double-check fluid level.
10. Reinstall the check plug with the proper wrench.
11. Request a second check of:
 - a. Check plug
 - b. Drain plug

CALL OUT: “Rear differential check plug tight; rear differential drain plug tight!”

12. Clean any excess fluids on the outside of the gearbox and plugs.



Task 3: Perform Automatic Transmission Service

T-Tech Machine

1. Before you begin, complete the oil change, including second checks.



If not done previously, be sure to check transmission fluid level before beginning the service.

2. Be certain the vehicle is in PARK, and the engine is OFF.
3. Look up the correct type of fluid in the Chek-Chart Reference Guide, or the vehicle owner’s manual.

4. Be sure that you have the correct fluid in stock before starting the service.

CALL OUT: “Transmission Service, Bay__!”

5. Fill the T-Tech unit with correct transmission fluid.



DO NOT begin service until T-Tech unit has been filled with new automatic transmission fluid.

6. Locate the most accessible transmission cooler lines, at the radiator, transmission, or rubber transmission lines, when possible.
7. Select appropriate adapter fitting and adapter hoses from connector kit, based on type of vehicle being serviced.
8. Disconnect transmission line at radiator, transmission, or rubber lines.

SAFETY Transmission fluid may be hot!

9. Connect adapter fitting and adapter hoses to radiator, transmission, or rubber lines.



DO NOT connect the clear hoses to the T-Tech machine until the following procedure has been completed.

CALL OUT: “Clear for zoom, Bay__!”

10. Determine the direction of ATF flow through transmission by starting the vehicle and allowing it to run for 2-3 **SECONDS**.



IMMEDIATELY TURN THE VEHICLE OFF.

11. One of the clear hoses will have partially filled with ATF from the vehicle. Connect the **BLACK** service hose to this line and to the “From Transmission” coupling on the T-Tech unit.
12. Connect the **RED** service hose to the empty clear line and to the “To Transmission” coupling on the T-Tech unit.



Make sure all connections are secure and all couplings are locked in place before proceeding.

CALL OUT: “Clear for zoom, Bay__!”

13. Start the vehicle. Transmission fluid will begin flowing out of the vehicle, and new fluid will flow into the vehicle from the T-Tech unit.



DO NOT shift the transmission into DRIVE to circulate the ATF.

14. When the piston in the T-Tech’s sight glass reaches the black line near the top of the cylinder, **TURN THE ENGINE OFF.**



Some larger vehicles may require more fluid.

15. With the vehicle off, disconnect both the **BLACK** and **RED** service hoses from the two (2) clear service-adapter hoses.
16. Disconnect the two (2) clear service adapter hoses and special connectors from the vehicle, and return the vehicle’s ATF line to its original position.

CALL OUT: “Clear for zoom, Bay__!”

17. Start the engine. While the engine is running, check the system for leaks.
18. Check the level of the transmission in **PARK** or **NEUTRAL** as required by the vehicle manufacturer. Top off fluid as necessary to “**FULL COLD**” level.
19. Turn off the engine.

AEC Machine

There are three different operating procedures for the TFE depending upon the vehicle and service to be completed. Below is a brief summary of each operating mode available with the Multi-Mode TFE.

Dipstick Mode

- Used ATF and new ATF are transferred through the transmission’s dipstick to the transmission system.
- The dipstick adapter is inserted into the transmission’s dipstick tube.

Cooler Mode

- Used ATF and new ATF are transferred through the cooler lines to the transmission system.
- Appropriate adapters are attached to the input and output lines of the transmission fluid cooler.

Manual/Top-Off Mode

- Used ATF and new ATF are transferred through the transmission's dipstick to the transmission.
- Used commonly when the transmission pan needs to be removed (to change gaskets or replace filter). Also used to top off ATF fluid level when necessary.

Power-Up Procedures



The machine MUST be powered up and start-up sequence completed BEFORE any service is started.

The power-up procedure is the same for all operating modes. Follow the procedures below:

1. Connect power cord to 12v DC battery.
 - a. Connect positive lead of the equipment to the positive lead of the battery first.
 - b. Connect the negative lead of the equipment to vehicle ground as far away from the battery as the leads will allow, to prevent sparking and igniting of battery gases.
 - c. If improperly connected the REVERSED POLARITY LED will light>



2. The MULTI-MODE will self test.
3. The buzzer will sound, all LEDs and display segments will light briefly, and software version will be displayed.
4. Pump will extract fluid from all lines and dipstick tube holder to prevent cross contamination of fluids.

At this point refer to the appropriate operating procedure depending on the mode you are using; dipstick mode, cooler mode or manual/top off mode.

Dipstick Mode – Operating Procedure

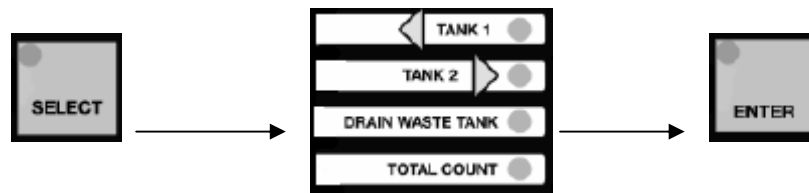


Confirm vehicle and transmission are at operating temperature before initiating service!

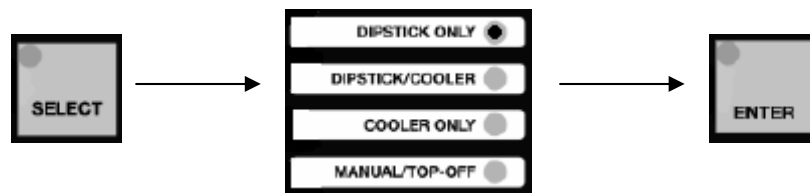


The machine MUST be powered up and start-up sequence completed BEFORE any service is started.

1. Remove dipstick from transmission – note dipstick length.
2. Insert flexible nylon dipstick tube to length of dipstick.
 - a. It may be necessary to insert the tube slightly farther than the length of the dipstick to reach the bottom of the pan.
3. The SELECT key and TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT LEDs will light and flash.
 - a. Press SELECT until only the LED for the proper function is lit and pause one second. Either TANK 1 (Dexron III/Mercon) or TANK 2 (Maxlife ATF).
 - b. Press ENTER to confirm selection.



4. The SELECT key and DISPSTICK ONLY, DIPSTICK COOLER, COOLER ONLY and MANUAL/TOP-OFF LEDs will light and flash.
 - a. Press SELECT until only the LED for DIPSTICK ONLY is lit and pause for one second.
 - b. Press ENTER to confirm.

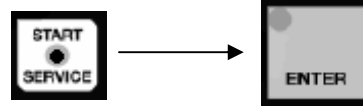


5. The left display indicating the quantity of new ATF for the service will show “12.” This is the default quantity. Use the Chek-Chart or POS to determine the proper quantity for the vehicle being serviced.
 - a. Add or subtract in one (1) quart increments by pressing the ADD (ARROW UP) or SUBTRACT (ARROW DOWN) buttons beneath the display.

- b. Press ENTER to confirm quantity displayed.



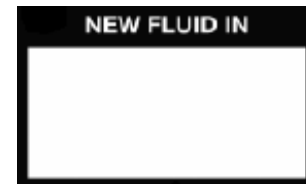
6. The alarm will sound and the START SERVICE and ENTER LEDs will flash. Press ENTER to start the ATF exchange.



The unit will now extract used ATF from the transmission pan through the transmission's dipstick until empty. The total volume is displayed on the right display.



The unit then pumps back the same volume of new ATF to the transmission's pan through the transmission dipstick. The total volume of new fluid pumped to the transmission is shown on the left display.



7. The alarm will sound and the START ENGINE and ENTER LEDs will flash.



8. **CALL OUT:** "Clear for zoom, Bay_____!"

9. Wait for response from bottom side.

10. Start the engine.

11. Press ENTER to confirm the engine is running.

The ATF circulates through the transmission system when the engine is running. The unit extracts one quart of now diluted ATF and returns one quart of new ATF through the dipstick to the transmission pan until the service is complete. The volumes of extracted fluid and new fluid are listed on the left and right displays.

12. The buzzer will sound and the END SERVICE and ENTER LEDs will light.



- a. Confirm by pressing ENTER.

13. CHECK TRANS LEVEL LED will light.



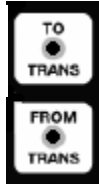
14. Remove the flexible nylon dipstick tube and insert the transmission dipstick and note the level.

15. Adjust the ATF level.

a. Press ENTER.

b. The TO TRANS, FROM TRANS, and FINISH LEDs will light.

If the level is too low press
SELECT until TO TRANS is lit.



If the level is too high press
SELECT until FROM TRANS is
lit.

c. Press the ADD (ARROW UP) button. The left display will indicate a cumulative one-tenth (.1) quart adjustment each time the ADD (ARROW UP) button is pressed.

d. If the level is correct press SELECT until the FINISH LED is lit.



e. Wait one second and press ENTER when it flashes to confirm the function, and then press enter again.

f. The unit will display SR FIN (service finished).

- The finish service function must be performed or it will not record used ATF amount in the waste tank.

Cooler Only Mode – Operating Procedure



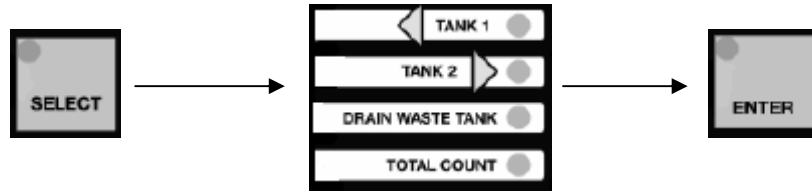
Confirm vehicle and transmission are at operating temperature before initiating service!



The machine MUST be powered up and start-up sequence completed BEFORE any service is started.

1. Identify cooler line.
2. Disconnect and attach appropriate adapters to the input and output connectors. These may be open hoses and/or snap or threaded fittings. Confirm connections are secure.
3. Attach adapters from input and output lines from cooler line to the MULTI-MODE cooler line selector valve assembly.
4. Disconnect red line from dipstick nozzle assembly.
5. Attach red line to male fitting on cooler line valve assembly.
6. The SELECT key and TANK1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT LEDs will light and flash.

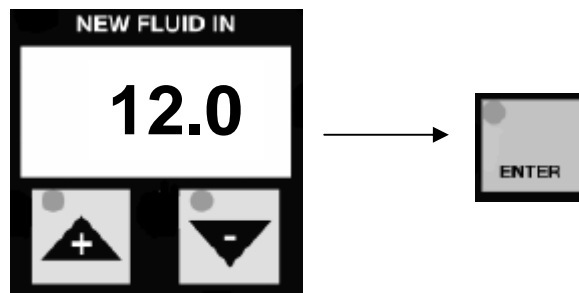
- a. Press the SELECT key until the proper function is lit. Either TANK 1 (Dexron III/Mercon) or TANK 2 (Maxlife ATF).
- b. When the LED for the appropriate tank is lit and flashing, pause one second and press ENTER to confirm when it begins to flash.



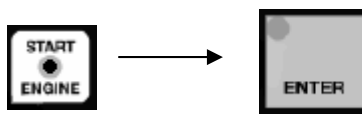
7. DIPSTICK ONLY, DIPSTICK/COOLER, COOLER ONLY, and MANUAL/TOP-OFF LEDs and the SELECT key will flash.
 - a. Press SELECT until only the COOLER ONLY LED is lit and flashing.
 - b. Pause for one second and press ENTER when it flashes to confirm selection.



8. The left display indicating the quantity of new ATF for the service will show “12.” This is the default quantity. Use the Chek-Chart or POS to determine the proper quantity for the vehicle being serviced.
 - a. Add or subtract in one (1) quart increments by pressing the ADD (ARROW UP) or SUBTRACT (ARROW DOWN) buttons beneath the display.
 - b. Press ENTER to confirm quantity displayed.



9. The alarm will sound and the START ENGINE and ENTER LEDs will flash.
 - a. **CALL OUT:** “Clear for zoom, Bay _____!”
 - b. Wait for response from bottom side.
 - c. Start the engine and then press ENTER to start the exchange.

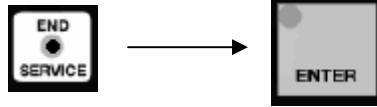


The MULTI-MODE senses pressure from the transmission and extracts used ATF from one of the cooler lines. It then pumps back the same volume through the other cooler line. This continues until the ATF volume selected for the service is reached.



The high output pump will automatically adjust flow appropriate to the volume of ATF being extracted – up to two gallons/minute. If flow from transmission is too slow, press brake pedal and shift transmission to neutral.

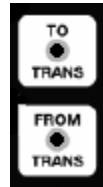
10. The auto sensing valve “shuts” allowing the fluid in the transmission system to circulate “closed.”
 - a. END SERVICE LED will light and buzzer will sound.
 - b. Press ENTER to confirm.



11. Remove the flexible nylon dipstick tube and insert the transmission dipstick and note the level.
12. Adjust the ATF level.
 - a. Press ENTER.
 - b. The TO TRANS, FROM TRANS, and FINISH LEDs will light.



If the level is too low press SELECT until TO TRANS is lit.



If the level is too high press SELECT until FROM TRANS is lit.

- c. Press the ADD (ARROW UP) button. The left display will indicate a cumulative one-tenth (.1) quart adjustment each time the ADD (ARROW UP) button is pressed.
- d. If the level is correct press SELECT until the FINISH LED is lit.
- e. Wait one second and press ENTER when it flashes to confirm the function, and then press enter again.
- f. The unit will display SR FIN (service finished).
 - The finish service function must be performed or it will not record used ATF amount in the waste tank.



Manual/Top-Off Mode – Operating Procedure

This mode is commonly used when the transmission pan needs to be removed (to change gaskets or replace filter). It is also used to top off the ATF fluid level when necessary.

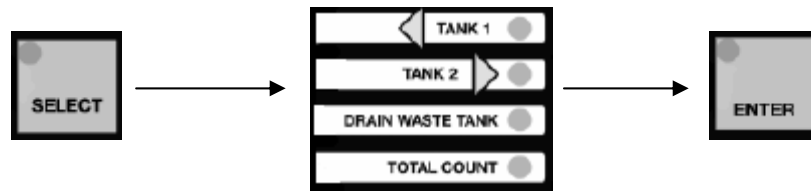


Confirm vehicle and transmission are at operating temperature before initiating service!



The machine MUST be powered up and start-up sequence completed BEFORE any service is started.

1. Remove dipstick from transmission – note dipstick length.
2. Insert flexible nylon dipstick tube to length of dipstick.
 - a. It may be necessary to insert the tube slightly farther than the length of the dipstick to reach the bottom of the pan.
3. The SELECT key and TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT LEDs will light and flash.
 - a. Press SELECT until only the LED for the proper function is lit and pause one second. Either TANK 1 (Dexron III/Mercon) or TANK 2 (Maxlife ATF).
 - b. Press ENTER to confirm selection.



4. DIPSTICK ONLY, DIPSTICK/COOLER, COOLER ONLY, and MANUAL/TOP-OFF LEDs and the SELECT key will flash.
 - a. Press SELECT until only the MANUAL/TOP-OFF is lit and flashing.
 - b. Pause for one second and press ENTER when it flashes to confirm selection.

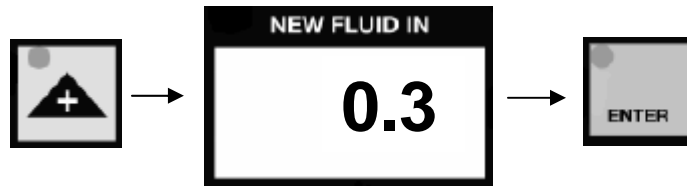


5. The CHECK TRANS LEVEL LED will light. TO TRANS, FROM TRANS and the display will flash DRN PAN
 - a. Press SELECT until the appropriate service or the DRN PAN display is lit.

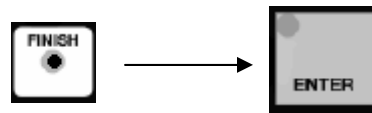


6. **If the TO TRANS or FROM TRANS service is selected, follow the procedure below.**
 - a. Press the ADD (ARROW UP) key to enter the volume of the new ATF to be added (if TO TRANS is selected). This key is also used to enter the volume of ATF to be extracted (if FROM TRANS is selected). The volume for adding or extracting is measured in increments of .1 (1/10) quart.

- b. Pause one second after the correct volume is selected and press ENTER to start the service.

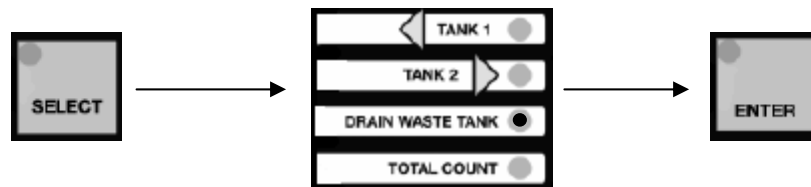


7. **If the DRN PAN is selected**, follow the procedure below.
 - a. Press ENTER to start the service.
8. When the TO TRANS, FROM TRANS, or DRAIN PAN service is complete the FINISH LED will light and flash. Press ENTER to confirm.



Drain Waste Tank – Operating Procedure

1. Place flexible nylon dipstick tube from MULTI-MODE into external waste ATF reservoir.
2. The SELECT key and TANK 1, TANK 2, DRAIN WASTE TANK, and TOTAL COUNT LEDs will light and flash.
 - a. Press SELECT until DRAIN WASTE TANK is lit and pause one second.
 - b. Press ENTER to confirm selection.



3. Display will register used ATF being discharged.
4. The unit will display SR FIN (service finished) when the waste tank is completely drained.



Task 4: Perform Serpentine Belt Replacement

Serpentine belt replacement may be performed in conjunction with the following services:

- Light replacement
- Air filter
- Wiper blades
- Battery replacement
- A/C service
- Differential/Manual transmission/transfer case service
- Radiator flush
- Oil Change

Serpentine belt replacement may not be performed during:

- Automatic transmission service
- Entire fuel system treatment
- Tire rotation

Serpentine belts that should not be replaced at VIOC due to difficulty and/or time include:

- Any vehicle without a tensioner
- Lincoln Continental's with a 4.6L side mounted belt
- Any Cadillac with a side mounted belt
- 98 or newer Mercury Cougar
- All 90's model Dodge Intrepids and Chrysler Sebring
- All Ford Taurus SHOs
- 98 or newer Ford Escorts and Escort ZX2's
- Mid 90's Jeep Cherokees and Grand Cherokees
- All Volvo S70's
- All Volkswagen

CALL OUT: "Serpentine belt replacement, Bay__!"

1. Make sure the engine is off.
2. Look up correct belt application.
3. Check under hood diagram for belt routing. If there is none, look in the Belt Application Guide. If one is still unavailable sketch your own based on the existing belt.
4. Determine what parts, if any, need to be moved or taken off in order to facilitate belt installation.

5. Determine type of tensioner used: spring loaded or lock-down.
6. If spring loaded, use proper belt tensioning tool to release tension from belt.
7. If lock-down, loosen locking bolts and release tension by backing off tensioner bolt.
8. Remove old belt.
9. Re-inspect old belt, and show to guest.
10. Install new belt, using correct routing.
11. Adjust belt, using either spring loaded tensioner or lock-down tensioner.
12. Check belt for fit, correct routing, and proper fit on pulleys. Reinstall anything that had to be removed in step 3.

CALL OUT: “Clear for zoom, Bay__!”



Task 5: Perform Tire Rotation

Pre-Service

1. Before you begin:
 - Make sure you have your safety glasses on
 - Complete the oil change including –
 - Presentation of the dipstick
 - Second checks
2. Is vehicle under approved weight limit for your lift?
3. Determine if you have the correct torque stick and impact socket for the year and make.
4. Does the vehicle require a key to remove rim or locking hub cap? Obtain from guest if needed.



Need for Speed Tip

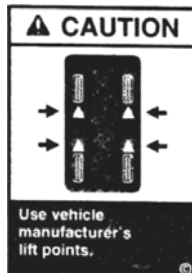
If a tire rotation is determined during the oil change, have bottom side technician place lift blocks during OC.



NEVER LIFT A VEHICLE WITH THE GUEST INSIDE. ESCORT THEM TO THE WAITING AREA AND POINT OUT THE FLOOR OPENINGS.

Start of Service

1. Center the vehicle over the lift.
2. Identify the vehicle lift points.



It is **critical** that the technician follows the manufacturer's recommended lift points. Manufacturer recommendations can be located in one of four places depending on the vehicle:

- Triangular markings on the under carriage of the vehicle
- A label placed on the inside of the front right door
- POS Technical Manual
- Chek-Chart Quick Lubrication Guide

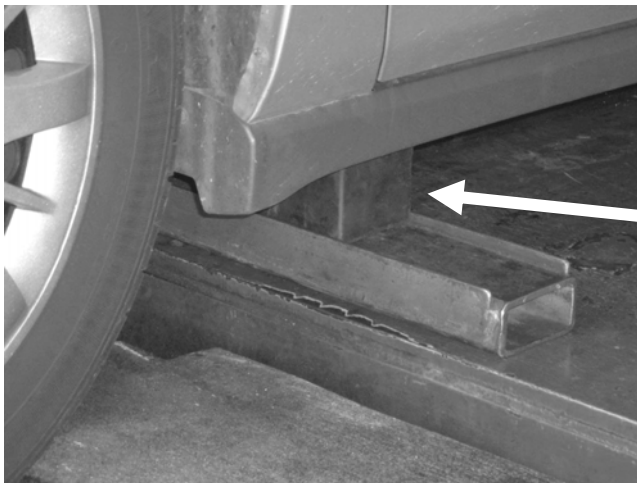
Load Vehicle



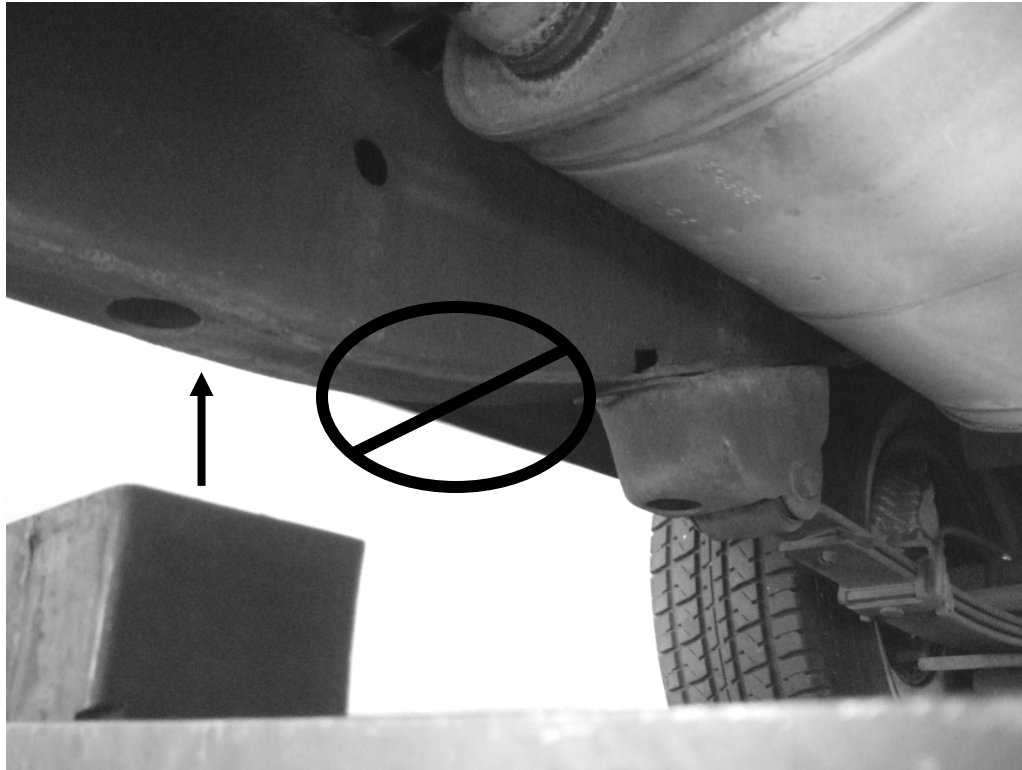
NEVER USE LIFT TO RAISE JUST ONE SIDE OR END OF THE VEHICLE.

3. Position adapters at the manufacturers recommended lift points. Install the rubber blocks, lift arms, height adapters or crossbars as required. *See illustrations below for examples.*

Herkules Lift Examples



One rubber block on the crossbar at the recommended lift point.



To prevent the vehicle from falling off the lift, make sure the block is centered on the flat part of the frame. **DO NOT** place on the sloped section of the frame.

Blazer Lift Examples



INCORRECT! Extension bar not locked into place and could cause the vehicle to fall.



CORRECT! Extension bar locked into place.

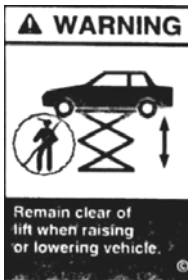


Use extension bars to reach the recommended lift points.



Use extension bars to reach the recommended lift points.

CALL OUT: “Clear for lift, Bay__!”



DO NOT lift a vehicle until everyone is clear of the lift!



Never double-stack rubber blocks or use an adapter that is not recommended by the lift manufacturer.

Lift Vehicle

1. Raise lift to the point of contact, **STOP**. Check all four points for any lifting problems. (EXAMPLE: exhaust pipe, gas line, muffler, etc.) If all points are correct and solid, continue lifting. Observe vehicle for balance on the lift. Correct if needed.

SAFETY Check safety latch on both sides to make sure lift is in locked position, once fully raised.

2. Lift to desired height and then lower vehicle slightly until lift contacts safety latches.
3. Remove hub cap or centerpiece. Place to the side, out of the walking area, and in a safe location.



Handle hub cap with care, without bending or hammering the edge.

4. Select the correct socket for lug nut removal. With the **air gun**, remove the lug nuts and place them in a container.



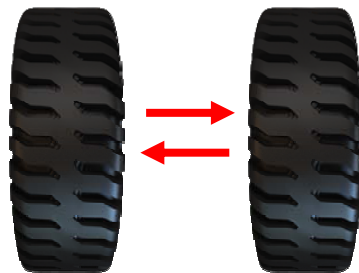
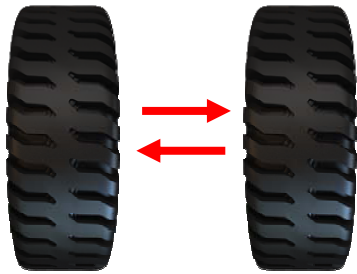
Never use a torque stick to remove lug nuts. Doing this will cause the torque stick to break.

5. Remove the tire from the vehicle.
6. Remove the second tire in the same order as steps 2, 3, and 4 of the “**Lift Vehicle**” instructions.
7. Tires of identical size (most vehicles) are to be rotated front to rear. If front and rear tires are not of identical size, tires can be switched from one side to the other IF the tire and/or wheel are not of a directional pattern. Refer to the diagram below:

Tire Rotation Diagram

Use when:

- **Different Size Tires – front and rear**
- **Non-Directional Tread Rotation**



Use when:

- **Same Size Tires**
- **Either Directional OR Non-Directional Tread Rotation**

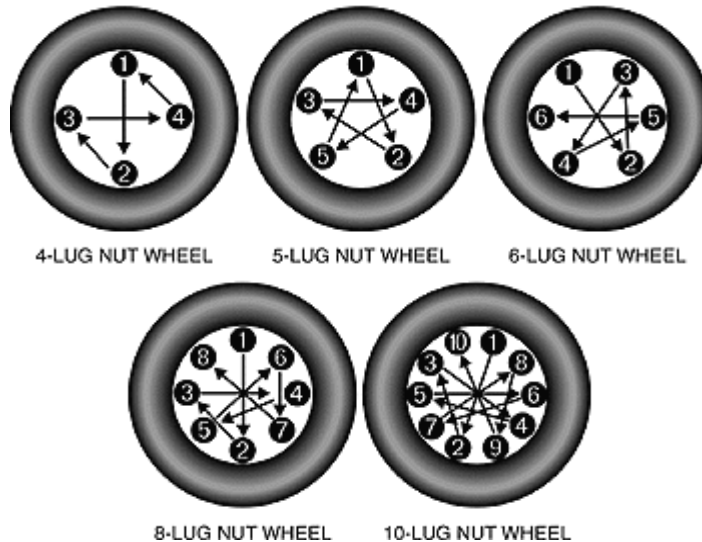


Reinstall the Tire

1. Reinstall the tire in its new position by fitting it onto the lugs and holding it around the outside surface only. **NEVER** place your hands or fingers inside the slots/openings of the rim. Doing this may cause injury.
2. Hand-install first two lug nuts directly across from each other in order to hold wheel in place and prevent damage.

3. Hand start remaining lug nuts and spin 2-3 turns by hand to ensure proper threading before using impact wrench.

Wheel Lug Nut Torque



4. Tighten lug nuts using the following method:
 - a. Slowly tighten the lug nuts with the **impact wrench** until they are snug up to the wheel and then apply full power of the wrench.
 - b. Use the correct **torque stick** to tighten all lug nuts in a star pattern as shown in the diagram above.



A torque stick is a special tool used to prevent over-tightening the lug nuts. Never use a torque stick to remove lug nuts. Doing this will cause the torque stick to break.

5. Request a second party check on the lug nuts and have someone observe while you tighten lugs completely a second time in the star pattern.
6. Replace the hub cap with the proper tool. Check that the valve stem is in the correct position in the hub cap.

Lower Vehicle

CALL OUT: “Clear to lower, Bay__!”

1. Raise lift to disengage the safety lock.
2. Lower the vehicle all the way down.
3. Lower the lift completely to the floor.
4. Remove any adapters or swing away from the vehicle frame.
5. The vehicle is now ready for departure.
6. Follow Super-Pro[®] 10 procedures for vehicle exit.



Task 6: Perform Valvoline Professional Series Entire Fuel System Cleaning

Where to Perform Service

The vast majority of all VPS Entire Fuel System Cleaning Services should be performed on the lot when the weather complies in order to keep bays free for other services. However, if the service must be performed indoors, the *exhaust hose must be attached during the entire service*.

Also, the throttle body cleaning step may be performed during any service when the car is not running.

VPS Entire Fuel System Cleaning may be performed in conjunction with the following services:

- Light replacement
- Wiper blades
- Tire Rotation
- Differential/Manual transmission/transfer case service

VPS Entire Fuel System Cleaning may not be performed during:

- Automatic transmission service
- Air filter
- A/C Service

Pre-Service

1. Visually check vehicle for any leaking fluids. Do not perform service on vehicles that appear to have significant fluid leaks.
2. Check to see that vehicle fuel tank is AT LEAST ½ full. If not, instruct guest to fill up immediately after service, or give the Fuel System Treatment to the guest to be added at next fill up.
3. Refer to Check-Chart Quick Lubrication Guide for engine type before servicing.
4. Remove the throttle-body air hose. If you cannot see throttle plate, Do NOT perform service.



Do NOT perform this service if the vehicle meets ANY of these conditions:

- Diesel, rotary, turbocharged, supercharged, carburetor, or TBI (throttle-body injected) engines.
- Signs of potential overheating, such as low coolant level, weeping radiator, leaking hose clamps, etc.
- Engine makes unusual noises, such as knocking or tapping
Mass airflow sensor is attached to the throttle body.

Step One: Throttle Body Cleaning



Engine must be off and should be at normal operating temperature.

5. Detach air duct.



If you cannot see the throttle plate, do not attempt to clean it.

6. Spray Throttle Body Cleaner on the swab included in the kit, and then use the swab to clean deposits on the throttle plate and in the throttle body bore. Open the throttle plate to clean the backside of the plate.

TIPS:

The throttle body may be rinsed after cleaning by spraying cleaner into the throttle body with the throttle plate closed. Use a shop towel to catch cleaner that drains from the throttle body. Use a shop towel to wipe excess cleaner out the throttle body.

7. If excessive cleaner has entered the engine during cleaning, hold the throttle open and let residual evaporate before starting engine.
8. Re-attach air duct.
9. Double-check all air and electrical connections that were removed during service for proper installation.



Disconnected or loose connections can cause check-engine light to come on.

CALL OUT: “Clear for zoom, Bay__!”

10. Ask the guest to start the engine.
11. Allow engine to idle for one minute. This will remove solvent from throttle areas. Make sure engine is idling smoothly and at the proper speed.
12. Shut off engine.

Step Two: Air Intake Cleaning

13. Locate a vacuum port (1/4" hose or bigger) as close as possible, but downstream of the throttle plate.



Vacuum ports upstream of the throttle plate will not produce a vacuum when the engine is idling. PCV and power brake vacuum sources are often the best to use.



Most vehicles are equipped with a Manifold Absolute Pressure (MAP) Sensor and a fuel pressure regulator that is supplied by the manifold vacuum (these hoses will be very small). DO NOT USE these sources.

14. Once proper vacuum has been located, disconnect the hose.
15. Insert the barbed cone from the installation tool. Make sure the cone is pointed toward the engine.
16. Attach the intake cleaner canister to the installation tool, and hang it from a convenient area under the hood.



Make sure the intake cleaner valve is closed, and that the hose is clear of moving parts and heat sources, such as fan blades, and exhaust manifolds.

CALL OUT: "Clear for zoom, Bay__!"

17. Have the guest start the engine, or start the vehicle yourself if the guest is not present.
18. While the engine is idling, open the intake cleaner valve until you get a fast drip in the sight glass. If the engine sounds like it is about to stall, close the valve slightly until the engine continues to idle.

19. The service is completed when you can no longer see the intake cleaner running through the supply hose, or dripping in the sight glass.
20. Have the guest shut off the engine, or turn it off yourself.
21. Disconnect the barbed cone from the vacuum line, and reattach the line.
22. Make sure any hoses or electrical connections that may have been disconnected are reconnected.

CALL OUT: “Clear for zoom, Bay__!”

23. Start the engine again, and allow it to idle for 1-2 minutes. Occasionally increase the RPM, but do not exceed 2000 RPM.



There may be a cloud of smoke, and/or a strong odor from the vehicle's exhaust during this service. This is normal, and the odor and smoke will burn off within a few miles of driving.

24. Shut off the engine.

Step Three: Fuel Injector Cleaning



Need for Speed Tip

Install injector cleaner in fuel tank while waiting for step 2 to complete.

25. Add Fuel System Treatment to gas tank.
26. Make sure the gas cap is tight after installation, as a loose cap may cause the check-engine light to come on.

After Service is Completed, Inform the Guest of the Following:

- Give the guest a copy of the After-Service Instructions.
- Remind the guest to fill up gas tank if less than half full.
- Use at least one full tank of gas before putting any additional additives into the tank.
- There may be a strong odor for up to 20 minutes following the service.
- Operation may be rough until all of the materials burn off, and the power-train management system has readjusted idle and fuel curves. This may occur for several miles.



Task 7: Perform Air-Conditioning System Check & Re-Charge

Air-Conditioning System Check & Re-Charge may be performed in conjunction with the following services:

- Light replacement
- Wiper blades
- Tire Rotation
- Differential/Manual transmission/transfer case service
- Air filter
- Battery replacement

Air-Conditioning System Check & Re-Charge may not be performed during:

- Automatic transmission service

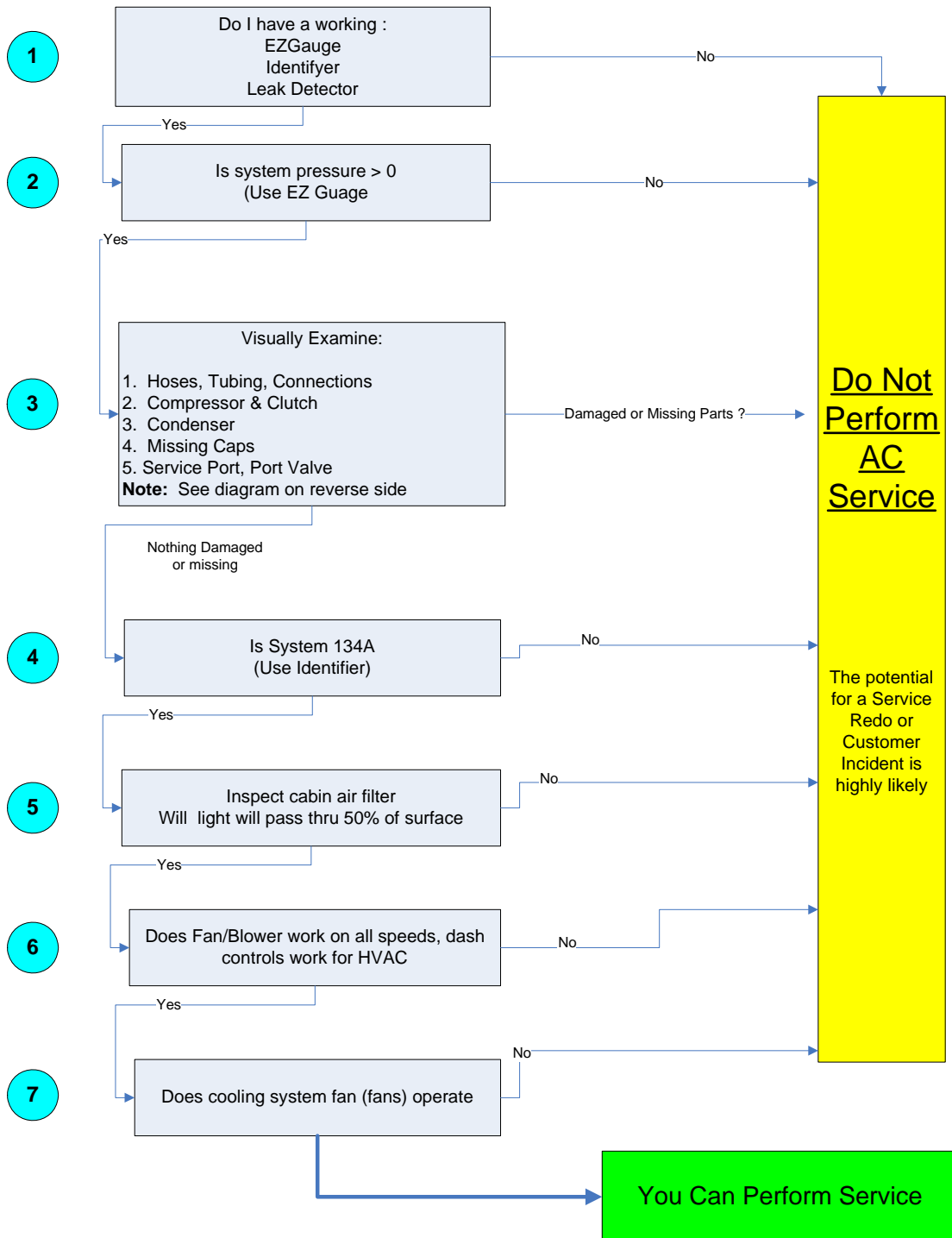


Need for Speed Tip

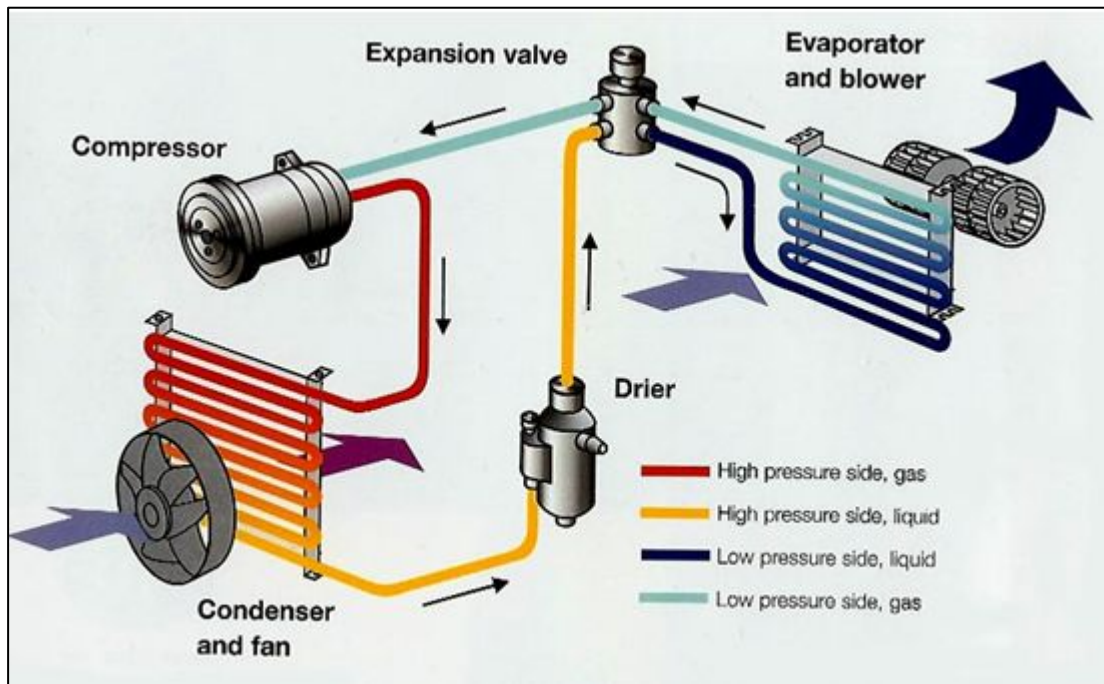
Nearly all A/C services should be performed outside the service center in order to keep bays clear for other services.

1. Before you begin:
 - a. Make sure you have your safety glasses on.
 - b. Complete the oil change including:
 - i. Presentation of the dipstick
 - ii. Second checks
2. Be certain the vehicle is in PARK, and the engine is OFF.
3. Inspect the A/C system, using the following decision tree. If the system fails any of these tests, do not perform the service. Inform the guest that we will be unable to perform the service until repairs are made.

AC SERVICE DECISION CRITERIA: version 04/15/08



When inspecting the cabin air filter, use the *Cabin Air Filter Installation Manual* to locate the vehicle's specific procedure for removing it from the vehicle.



Perform the A/C System Check



If more serious problems are noted through your visual inspection of the A/C system, politely inform the CSR or guest that we will be unable to recharge the system until repairs are made.

CALL OUT: “A/C Service, Bay__!”

1. Locate the high and low pressure valves on the vehicle’s A/C System.
2. Plug in the Automotive Refrigerant Identifier. It will take about 1-½ minutes to warm up and calibrate itself. There will be a slight humming and vibration indicating that the unit is calibrating.



The Automotive Refrigerant Identifier is a very sensitive and expensive piece of equipment. Be careful not to drop it!

3. Hook up the identifier hose to the low-pressure valve, and press A to start.
4. In about 30 seconds, the identifier window will display the results.



If the indicator displays “pass” you may proceed to step 1 under “Perform the A/C Recharge”. If the window displays any other mix of refrigerant or other chemicals, DO NOT perform the work. The identifier can be hooked up to a printer so you can print a copy of the results for the guest.

Perform the A/C Recharge

1. Set up the A/C machine and turn the main power switch ON.
2. Attach the RED and BLUE hoses to the A/C System per the vehicle manufacturer’s instructions, and open the RED and BLUE hose valves.
3. Determine the refrigerant capacity of the A/C system to be charged.



1 oz. = 0.023835 Kg & 1 LB = 0.45359 Kg

This capacity is usually found on a yellow decal under the hood that has information about the vehicle’s A/C system. If you can’t find the decal, refer to the Chek-chart tab in the POS.

4. Using the keypad, press ENTER when the display reads “WEIGHT= XX.X LB” “AUTOMATIC?” (This is the default screen of the Main Menu.)



The Recycle Hold Time is the amount of time the A/C machine waits for “outgassing” or for the pressure in the A/C System being recovered to rise enough to automatically restart the recovery process. The minimum value is two (2) minutes. The value entered is stored in memory and comes up as the default the next time the procedure is used.

5. Press UP ARROW to ENTER RECYCLE HOLD TIME. Press RIGHT ARROW to change to a different field. Press ENTER to accept the value.
6. Press UP ARROW to change the value of the field. Press RIGHT ARROW to change to a different field. Press ENTER to accept the value.
7. Press RIGHT ARROW to move the cursor between Y and N to select whether or not the RHS780 pauses at the end of vacuuming so that a vacuum leak can be detected in the A/C System. Press ENTER to accept the Yes or No choice. The choice entered is stored in memory and comes up as the default the next time the procedure is used. The display will read “ADD OIL? Y/N”.

8. Press **RIGHT ARROW** to move the cursor between Y and N to select whether or not the RHS780 pauses at the end of Vacuuming (or vacuum leak checking) to allow the adding of oil to the A/C system. Press **ENTER** to accept the YES or NO choice. The choice entered is stored in memory and comes up as the default the next time the procedure is used.
9. Press **UP ARROW** to enter the amount of refrigerant to be installed. The value entered must be greater than zero. Press **ENTER** to accept the value.



This screen will display if the RHS780 charge cylinder contains less refrigerant than the entered value. When this occurs, the charging cylinder should be filled. Press **ENTER** to return to the Main Menu.

10. Based on the vehicle manufacturer's instructions, choose charging through either the high pressure hose (preferred) or the low pressure hose by pressing the top or bottom (respectively) of the High/Low Charge selector switch located on the left side of the RHS780 above the fill cylinder port.

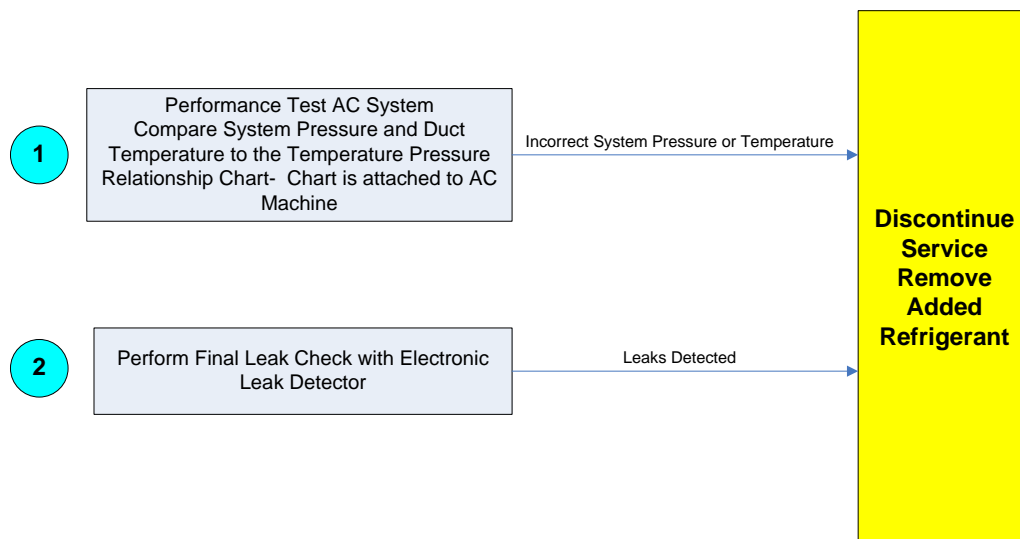


DO NOT TURN ON THE A/C SYSTEM. The RHS780 supplies refrigerant in its liquid state and adding liquid refrigerant to a running A/C system may cause immediate A/C compressor failure.

11. Press **ENTER** to start the RHS780 automatic sequence. The RHS780 will recover and recycle refrigerant from the A/C system and automatically cycle off when a vacuum is sensed. This vacuum level can be seen on the low pressure gauge. The display will read "WEIGHT = XX.X LB COMPRESSOR OFF".
12. If a vacuum leak check was selected by choosing Y, the display will read "PUMP OFF XX MIN CONTINUE" and the attention light will turn on. The elapsed time since the vacuum pump stopped will count up on the display. An increasing pressure on the low pressure gauge is evidence of a vacuum leak in the A/C System. Press **ENTER** to continue with the automatic sequence, or **RESET** to return to the Main Menu.
13. If adding oil was selected by choosing Y, the display will read "ADD OIL, NOW CONTINUE" and the attention light will turn on. Add oil to the high or low side (based on the vehicle manufacturer's instructions) during the charging portion of the automatic sequence, by opening the valve on the oil charge bottle. Close the valve on the oil charge bottle, and press **ENTER** to continue.

14. If a charge amount greater than zero pounds was entered, the refrigerant will be flowing from the charging cylinder into the vehicle. The display will show increasing weight from zero to the charging amount entered, plus a one-ounce (0.03 KG) “OVER CHARGE” set at the factory to compensate for hose loss. When the RHS780 has finished, the attention light will turn on.
15. Press ENTER. The display will read “DRAIN RECOVERED OIL NOW”.
16. Press ENTER to return to the main menu. The A/C system can now be turned on and checked by monitoring the high and low pressure gauges.

AC AFTER-SERVICE PERFORMANCE & LEAK TEST



CALL OUT: “Clear for zoom, Bay__!”

17. Have the guest start the engine, or start the vehicle yourself if the guest is not present.
18. Turn the vehicle’s A/C to maximum cooling. Turn the fan on high and insert a thermometer into one of the cooling vents on the vehicle’s dashboard.
19. Once the thermometer has indicated an acceptable temperature, and the high and low pressure gauges read acceptable pressures according to the ambient air temp, pressure relationship chart, you can shut off the vehicle.
20. Close the RED and BLUE hose valves, disconnect them from the A/C system and (RECYCLE/RECOVER) to evacuate the refrigerant from the hoses.

21. Turn on the leak detector, and use it to check for leaks by holding the tip near all A/C fittings under the hoods, near compressor, condenser and any other connection points. Also use the detector to “sniff” inside the vehicle, under the dashboard and near the ventilation ducts. If a leak is detected, the unit will emit a high-pitched, rapid tone. Check several times, as the unit is very sensitive.



The Leak Detector unit is a very sensitive and expensive piece of equipment. Be careful not to drop it!



Task 8: Perform Battery Replacement

Battery replacement may be performed in conjunction with the following services:

- Coolant replacement service (with jump box)
- Differential/Manual Transmission/Transfer Case fluid replacement
- Serpentine belt replacement
- Tire rotation
- Air-conditioning system check and re-charge

Perform Starter and Charging System Test

1. Move to the driver-side door. Be sure the driver’s window is open.
2. When prompted, ask the guest to start the engine. After a few seconds the analyzer will display the results in a series of three screens.



Verify that there is oil in the car before starting the engine.

3. If the results read **CRANKING NORMAL**, press **ENTER** to continue the test. If any other result displays, let the CSR know that there may be a problem with the starter. The guest should have the starter checked at the dealer.
4. Press **ENTER** to begin the alternator test. The analyzer displays **CHECKING THE ALTERNATOR FOR OUTPUT**. Press **ENTER** to continue.



If necessary the analyzer will ask if you are testing a diesel engine. It will resume testing after you make your selection.

5. Press **ENTER** to continue. The analyzer displays TURN ALL VEHICLE LOADS OFF, IDLE ENGINE. Turn off blowers, the interior light, the radio and any load load-producing device and idle the engine.
6. Press **ENTER** to continue. The analyzer displays REV ENGINE WITH LOADS OFF FOR 5 SECONDS. Ask the guest to gradually increase the rpm until the analyzer tells you to HOLD the rev level as the bar on the display crosses the rpm target line. The analyzer displays ACQUIRING DATA, HOLD ENGINE RPM.



In some cases the analyzer will display ENGINE REV NOT DETECTED despite your revving the engine. Some eight-cylinder and older vehicles idle at a high level after starting, allowing the analyzer to detect the rev automatically without your having to increase the rpm.

7. Be sure the guest continues to hold the rpm while the analyzer takes system measurements. The analyzer displays TESTING ALTERNATOR AT IDLE, LOADS OFF.. The analyzer displays TURN HIGH BEAMS AND BLOWER ON, IDLE ENGINE.
8. Ask the guest to turn on the high-beam headlights, the blower to high and the rear defogger. Make sure the air conditioner and the wipers are off. This will determine if the charging system is able to provide enough current for the demands of the electrical system. The analyzer will display TESTING ALTERNATOR AT IDLE, LOADS ON. The analyzer will determine if the charging system is able to provide sufficient current for the demands of the vehicle electrical system. The analyzer displays REV ENGINE WITH LOADS ON FOR 5 SECONDS.
9. Ask the guest to gradually increase the rev until the analyzer tell you to HOLD the rev level as the bar on the display crosses the rpm target line. The analyzer displays ACQUIRING DATA...HOLD ENGINE RPM.
10. Be sure the guest continues to hold the rpm while the analyzer takes system measurements. The analyzer will display ENGINE REV DETECTED, IDLE ENGINE.
11. Press **ENTER** to continue. The analyzer will display TURN OFF LOADS AND ENGINE.
12. Ask the guest to turn off the engine. Press **ENTER** to display the results. If the display reads NO PROBLEMS, press BACK to print the report and provide it to the CSR. Let the CSR know that battery replacement is recommended. If any other results display, let the CSR know there may be a problem with the alternator. The guest should have it checked at the dealer.

Perform Battery Replacement

1. Verify that the proper battery is in stock.
2. Put on the proper safety equipment, neoprene gloves and safety glasses. Prescription glasses do not meet safety requirements. Employees who wear glasses must wear safety goggles over their prescription glasses.
3. Use only approved battery tools throughout service, including the tool-kit, sealer and carrier.
4. Verify that the top-side water hose is connected and available.
5. Verify that all battery loads are switched off.
6. Inspect condition of battery terminals and hold down. Inform customer of any conditions that may interfere with service. Inform customer if the battery is leaking.



Do not change the battery if there are leaks.

7. Determine type of battery (top or side terminal). Install the memory saver in the cigarette lighter.
8. On top terminal batteries loosen bolts and remove terminals with the puller. On side terminal batteries remove bolts.



Always remove the negative terminal first.

9. Move the battery cables away from battery to allow clearance to remove the battery. Do not ground the positive terminal. Computer memory will be lost.
10. Remove the battery hold down.
11. Make sure the battery caps are firmly seated.
12. Remove the battery from vehicle being careful not to tip or drop the battery. Always use the battery carrier to transport batteries.
13. Clean the terminals with proper battery brush.
14. Clean the battery box if necessary.



Do not use water or washer fluid to clean the battery box or terminals.

15. Punch the date code label with the current month and year for warranty purposes.
16. Install the new battery.
17. Install the battery hold down.
18. Install the battery terminals, positive first. Make sure the battery polarity is correct. Reverse polarity will cause vehicle damage. Remove the memory saver from the cigarette lighter.
19. Spray the terminals with sealer to prevent corrosion.
20. Start the vehicle and check for proper operation. Some vehicles may take a few minutes to relearn engine functions after battery service if the memory saver did not retain vehicle's memory.
21. Take the old Battery (core) to the core rack.
22. Using the battery carrier, place the battery on core rack. Visually inspect the core rack area for leaks. Remove the carrier.



Minnesota locations must have containment for all cores.

1. Place the core in the battery box.
 2. Secure the lid.
 3. Place the battery box on the rack.
 4. At core pick-up remove the cores from the battery boxes and stack the boxes for reuse.
23. If you find a core is leaking on the rack, follow these procedures:
- Put baking soda on bottom of storage tub.
 - Place the battery in storage tub.
 - Replace the battery on the core rack.
 - Send the entire containment tub with the route driver during the next scheduled delivery.
 - Replace the containment tub.



Task 9: Perform Eagle One[®] Cabin Air Filter Replacement

1. Locate the cabin air filter part number in the Valvoline filter guide.
2. Check to see the correct filter is in stock.
3. Follow the directions found inside the filter box.



Task 10: Perform Power Steering Flush



- Make sure front wheels are beyond pit opening.
- Do not perform service on soft asphalt.
- Do not let the reservoir go dry.

1. Make sure engine is off and the KEYS REMOVED FROM THE IGNITION.
2. Inspect power steering system (housing and lines). If leaks are found do not perform the service.

CALL OUT: “Clear for Power Steering Flush, Bay__!”

3. Wait for bottom-side tech to respond, “Clear, Bay ___!”
4. Remove power steering reservoir cap and remove fluid from reservoir with the PSX-2.

CALL OUT: “Clear for Power Steering Flush Fill, Bay__!”

5. Wait for bottom-side tech to respond, “Clear, Bay ___!”
6. Refill reservoir with Power Steering Flush (step 1)

CALL OUT: “Clear for Zoom, Bay__!”

7. Wait for bottom-side tech to respond, “Clear, Bay ___!”

8. Set parking brake and with foot on brake pedal start engine.



You will need two technicians to complete steps 9 and 10.

- Topside Tech 1 will continue to execute step 9 until Topside Tech 2 completes step 10 in full.
- The flush is not complete until all 64oz. of flush solvent is used.

9. Turn steering wheel all the way to the right until steering wheel locks and then all the way to the left until steering wheel locks.

10. Draw fluid down and add flush with the PSX-2 while turn the wheel until entire 64oz is used.

11. Once flush is complete turn vehicle off, **REMOVE KEYS FROM IGNITION**, and completely empty reservoir using the PSX-2.

CALL OUT: “Clear for Power Steering Fluid Fill, Bay__!”

12. Wait for bottom-side tech to respond, “Clear, Bay ___!”

13. Fill reservoir with Synpower Power Steering Fluid to the proper level. (Step 2)

CALL OUT: “Clear for Zoom, Bay__!”

14. Wait for bottom-side tech to respond, “Clear, Bay ___!”

15. Start engine and turn wheel side to side.

16. Turn vehicle off and **REMOVE KEYS FROM IGNITION**

17. Check power steering fluid level and replace reservoir cap. If fluid is low add need amount of fluid to proper level.

CALL OUT: “Power Steering Fluid full, Bay__! Ready for second party check, Bay ___!”

18. Ask a co-worker to conduct second part checks on the power steering reservoir cap.

CALL OUT: “Power Steering cap tight, Bay__!”

19. Carefully close the hood with a clean towel, and verify the hood is properly closed, wipe any marks off of vehicle.



Task 11: Perform Pyroil[®] Engine Flush

How It Works

Pyroil[®] Engine Flush is added to the car's crankcase before servicing the vehicle. Allow the car to run for five minutes. The Engine Flush will melt sludge and clean engines. Pyroil[®] Engine Flush also opens restricted passages, dissolves power-robbing deposits, frees sticky valves and lifters, improves oil circulation, and cleans sticky piston rings/reduces blow-by.

Directions

1. Check to make certain oil in crankcase is up to a safe level
2. Warm the engine to driving temperature.
3. Immediately before changing oil and filter, add Pyroil[®] Engine Flush to crankcase
4. Allow engine to run at normal idle speed for 5 minutes
 - Do not drive vehicle or race engine until crankcase has been drained and fresh motor oil installed
5. Drain crankcase and replace oil filter
6. Refill crankcase with fresh oil



Task 12: Perform Fuel Filter Replacement

Working with fuel in the service center can be hazardous, unless you follow some simple safety requirements.

- Only use the correct metal fuel tray with bonding strap. Do not use other pans that do not bond to the vehicle.
- Install bonding strap from metal tray to vehicle.
- Put on approved fuel resistant gloves
- Immediately take fuel in metal tray to type-2 fuel container outdoors upon completion of service.
- Follow approved procedures for handling and disposal of used fuel filters.
- If fuel is spilled on your uniform, wash up and change immediately after service.

- All spills must be cleaned up immediately.
- Under no circumstances, shall gasoline be stored in the pit at any time, no matter how brief the time.
- Never allow gasoline to drain into the waste oil drain pan.
- Under no circumstances shall gasoline/waste gasoline be added to the waste oil.
- Under no circumstances shall a fuel filter or fuel filter assembly be struck with any tool other than a dead blow hammer to loosen it from its bracket.



Fuel Filter Replacement should never be performed on any vehicle in which you must move, adjust or remove the gas tank in order to access the fuel filter. The service should not be performed on any vehicle with which you are unfamiliar. Fuel filter service is not an approved Valvoline Instant Oil Change service in these circumstances.

Always wear the required personal protective equipment prior to performing a fuel filter replacement service. This consists of:

- Sol-Vex Nitrile Gloves
- Safety Glasses With Side Shields

-
1. Make sure engine is off and KEYS ARE REMOVED FROM THE IGNITION.
 2. Determine if the fuel filter is accessible and can be removed easily.
 3. Look up the correct fuel filter application. Make sure the fuel filter is in stock.



Check the Fuel System Pressure Chart in order to determine how much, if any, pressure will be in the fuel line. This will help you be prepared for the amount of fuel that is likely to leak out when the fuel line is disconnected from the fuel filter.

4. Verify the application and filter number with another technician.
5. Attach the fuel catch pan to the pit rail.
6. Attach the bonding cable to the vehicle frame.

CALL OUT: “Fuel filter change, fuel filter #, Bay ___!”

7. Remove the fuel cap. Place fuel cap on hood latch if possible. Leave fuel door open.

CALL OUT: “Fuel cap removed, keys are on the dash, Bay ___!”

8. Bottom-side tech calls out, in response to Top-side tech:
“(Fuel filter #, Bay ___!”
9. Select the proper tool to remove the fuel line clamps. Remove the fuel lines using the approved catch pan to catch any spilled gasoline.



Many fuel systems maintain pressure in the fuel lines even when the vehicle is not running. **Be extremely careful when disconnecting any fuel lines!** In order to reduce the chance of personal injury, cover fuel line fittings with a shop towel before disconnecting to catch any fuel that may leak out. Place the shop towel in an approved container when disconnect is complete.

10. Remove the filter from the bracket or clamp. Drain the gasoline from the filter into the container. Dispose of the filter in the proper method.
11. Install the fuel filter in the bracket or clamp making sure the flow arrow is pointing in the correct direction.
12. Install the fuel lines and clamps using the proper tools.
13. Request second party checks on fuel line clamps and fuel filter bracket.

CALL OUT: “Ready for second-party fuel filter check, Bay ___!”

14. While another technician watches, call out each item, waiting until they respond with “Check!” before calling out the next one. Check the fuel flow directional arrow, the fuel hose clamps for correct installation and tightness and the fuel filter bracket/clamp for tightness.

CALL OUT: “In-line tight!” (“Check!”), “Out-line tight!” (Check!), “Fuel filter tight!” (“Check!”), ready to pressurize, Bay ___!”

15. Topside technician acknowledges that second party checks have been completed.

CALL OUT: Second party check complete, Bay ___!”

16. Replace the fuel cap.

CALL OUT: “Fuel cap replaced, clear to pressurize and zoom, Bay ___!”

Wait for bottom-side tech to respond, “Clear, Bay ___!”

17. Turn the ignition to on, until you hear the indicator (“dingy”) sound. Count to two slowly, then turn the ignition off. Repeat. Turn the ignition to on (again, until you hear the indicator sound) a third time, count to two, then start the vehicle. Run the vehicle for thirty seconds checking for leaks.

CALL OUT: “OK bottom-side, Bay ___!”

18. When finished, unhook the catch pan and have the topside technician take it to be emptied into the waste fuel container.
19. When transferring the waste fuel into the waste fuel container, use a metal funnel to prevent any spills.
20. Connect the bonding strap on the catch pan to the waste fuel container.
21. Pour the fuel from the catch pan into the waste fuel container.
22. Wipe down the catch pan and tools with a disposable shop towel to remove any residual fuel. This shop towel should be added to the bagged fuel filters for disposal.
23. Place the fuel filter in the fuel filter drain container for a period of 12 hours.
24. After fuel filter has properly drained, dispose of the filter according to the Fuel Filter Handling and Disposal policy.

Fuel Spill Cleanup Procedures

1. If absorbents are used from the spill kit, they must be placed in a plastic bag and held separate to be picked up by the used oil vendor.
2. Never use a Shop-Vac or any other electrical or mechanical method to clean a gasoline spill.



Test Your Knowledge: Additional Services Test

Before you meet with your trainer, take a moment to test your SuperPro 10 knowledge. Follow the steps below to take the **Additional Services** test.

When you have completed the test, print the last page and give to your trainer during your next training meeting.

Accessing the Course:

Follow the instructions below to access the **Additional Services Test** course:

1. In the Address line of your internet browser, enter **www.learnvalvoline.com**.
2. Enter the user name and password provided by your manager.
3. Click the **Login** button. The VIOC University home page displays.

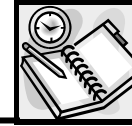
Taking the Course:

To take the course:

1. Click the **Technician** header to see available technician-level courses and tests.
2. Click the course title **Additional Services Test**. The course description displays.
3. Click the **Take Course** button. The course launches.
4. Take the course and close the course window.
5. To end your session in VIOC University On-line, click the **Logout** button located in the top right corner of your screen.



Meet with Your Trainer 5



1. Note in the space provided any questions you may have about what you have read, and record the Trainer's answers to those questions.

2. Answer the Trainer's questions about what you have just read.
3. Observe the Trainer performing Additional Services. Use the "Additional Services OBSERVE/DO/CERTIFY Checklist" which begins on the next page.
4. Do these same tasks yourself while the Trainer observes and offers help. (The Trainer will use the "Additional Services OBSERVE/DO/CERTIFY Checklist" to check off your progress.)
5. Ask your Trainer the following questions. Record your answers in the space provided.

When changing automatic transmission fluid, where do you look to find the proper type and amount of fluid?

When replacing anti-freeze, what is the proper mixture of water to anti-freeze?

What method do we use to remove a coolant cap?

What is the first thing you must do when performing any service that includes replacing a fluid?

-
6. **Date and initial the Progress Chart at the front of the manual. (Be sure your Trainer initials it also.) Then set a time for your next meeting on the line below:**

(date/time)



Additional Services OBSERVE/DO/CERTIFY Checklists

Watch your Service Center Manager (or assigned Trainer) demonstrate the following activities. After he or she demonstrates an activity, check it off in the Observe column. Then perform the same activities as the Service Center Manager observes and offers help. After you perform an activity satisfactorily, your Trainer will check it off in the Do column. Be sure to take notes on any procedures you feel will help you carry out these responsibilities in the future. The certify column will be used to certify you as a Super-Pro[®] Technician.

Task 1: Perform Coolant Replacement Service

Activity	Observe	Do	Certify
1. Turn off the vehicle.	_____	_____	_____
2. Make sure you are wearing your required PPE.	_____	_____	_____
3. Before opening the coolant cap, squeeze the upper radiator hose to check pressure.	_____	_____	_____
4. Remove coolant cap carefully using the six-finger method and towel.	_____	_____	_____
5. Remove the cap from the overflow container.	_____	_____	_____
6. Attach wand to black hose. Close the valve.	_____	_____	_____
7. Turn control valve to LOWER RADIATOR & OVERFLOW.	_____	_____	_____
8. Turn on pump using LOWER RADIATOR & OVERFLOW selector switch.	_____	_____	_____
9. Drain overflow and radiator level below upper radiator hose using wand and control valve.	_____	_____	_____
10. Turn off pump using LOWER RADIATOR & OVERFLOW selector switch.	_____	_____	_____
11. Replace caps on radiator and overflow.	_____	_____	_____
12. Disconnect upper radiator hose from appropriate place.	_____	_____	_____

Activity	Observe	Do	Certify
13. Select correct adapter hose and connect at correct location.			
14. Install adapters in correct locations.			
15. Connect green and black hoses to the 2 step adapters.			
16. Determine correct cooling system capacity.			
17. Fill new coolant tank with 50/50 mix of correct type coolant.			
18. Check waste tank so there is enough room to hold evacuated coolant.			
19. Turn control valve to EXCHANGE COOLANT.			
20. Turn pump on using selector switch.			
21. Turn pump off when correct amount of coolant has been exchanged.			
22. Close step adapter valves, disconnect hoses.			
23. Use wand to drain radiator level as needed.			
24. Remove all hoses, reattach radiator hose, and remove overflow cap.			
25. Fill overflow and radiator to proper levels, using the wand.			
26. Replace radiator and overflow caps.			
27. Shut off and unplug MCX-1.			
28. CALL OUT: "Clear for zoom, Bay__!"			
29. Ask the guest to start their vehicle.			
30. Check that coolant is circulating properly through the system by visually checking the flow in the radiator neck.			
31. Ask a coworker to conduct a second-party check.			

Activity	Observe	Do	Certify
32. Ask the guest to stop back the next day to check for proper level and protection in the cooling system and enter R5 code on Work order.			

Task 2: Perform Differential/Manual Transmission Drain and Fill Service

Activity	Observe	Do	Certify
1. CALL OUT: “Differential/Manual Transmission service, Bay_!”			
2. Before beginning, make sure that the proper fluid for the vehicle is in stock.			
3. Check differential/manual transmission for leaks.			
4. Remove the check plug.			
5. Inspect head, threads, and gasket.			
6. Replace a worn or damaged check plug or gasket.			
7. Remove drain plug, if equipped.			
8. Inspect head, threads, and gasket.			
9. Clean drain plug of all metal filings.			
10. Allow gearbox to drain completely.			
11. Replace a worn or damaged drain plug or gasket.			
12. If there is no drain plug:			
• Connect evacuator to air line			
• Insert tube through check plug to bottom of unit			
• OR use a suction gun			
13. Evacuate old fluid until evacuator draws air only			
14. Reinstall drain plug with the proper wrench.			

	Activity	Observe	Do	Certify
15.	Fill with proper fluid to within ¼ inch of check plug hole.			
16.	CALL OUT: “(number) pints, (type of fluid), Bay__!”			
17.	Double-check fluid level.			
18.	Reinstall check plug with the proper wrench.			
19.	Request second-party check of: <ul style="list-style-type: none"> • Check plug • Drain plug 			
20.	CALL OUT: Rear differential check plug tight, rear differential drain plug tight!”			
21.	Clean any excess fluids on the outside of the gearbox and plugs.			

Task 3: Perform Automatic Transmission Service

	Activity	Observe	Do	Certify
1.	Before you begin, complete the oil change, including second-party checks.			
2.	Be certain the vehicle is in PARK, and the engine is OFF.			
3.	Look up the correct type of fluid in the <i>Chek-Chart Reference Guide</i> , or the vehicle owner’s manual.			
4.	Be sure that you have the correct fluid in stock before starting the service.			
5.	CALL OUT: “Transmission Service, Bay__!”			

Activity	Observe	Do	Certify
<p>If you are using a T-Tech machine proceed with #6 below. If you are using an AEC machine move ahead to #24.</p>			
6. Fill T-Tech unit with correct transmission fluid.			
7. Locate the most accessible transmission cooler lines, at the radiator, transmission, or rubber transmission lines, when possible.			
8. Select appropriate adapter fitting and adapter hoses from connector kit, based on type of vehicle being serviced.			
9. Disconnect transmission line at radiator transmission, or rubber lines.			
10. Connect adapter fitting and adapter hoses to radiator, transmission, or rubber lines.			
11. CALL OUT: “Clear for zoom, Bay__!”			
12. Determine the direction of ATF flow through transmission by starting the vehicle and allowing it to run for 2-3 <u>SECONDS</u> .			
<p>IMMEDIATELY TURN THE VEHICLE OFF.</p>			
13. One of the clear hoses will have partially filled with ATF from the vehicle. Connect the BLACK service hose to this line and to the “From Transmission” coupling on the T-Tech unit.			
14. Connect the RED service hose to the empty clear line and to the “To Transmission” coupling on the T-Tech unit.			
15. CALL OUT: “Clear for zoom, Bay__!”			
16. Start the vehicle. Transmission fluid will begin flowing out of the vehicle, and new fluid will flow into the vehicle from the T-Tech unit.			

Activity	Observe	Do	Certify
17. When the piston in the T-Tech's sight glass reaches the black line near the top of the cylinder, TURN THE ENGINE OFF.	_____	_____	_____
18. With the vehicle off, disconnect both the BLACK and RED service hoses from the two (2) clear service-adapter hoses.	_____	_____	_____
19. Disconnect the two (2) clear service adapter hoses and special connectors from the vehicle and return the vehicle's ATF line to its original position.	_____	_____	_____
20. CALL OUT: "Clear for zoom, Bay__!"	_____	_____	_____
21. Start the engine. While the engine is running, check the system for leaks.	_____	_____	_____
22. Check the level of the transmission in PARK or NEUTRAL as required by the vehicle manufacturer. Top off fluid as necessary to "FULL COLD" level.	_____	_____	_____
23. Turn off engine.	_____	_____	_____
AEC Dip-Stick Mode			
24. Connect power cord to 12v DC battery.	_____	_____	_____
25. Allow the machine to power-up fully.	_____	_____	_____
26. Remove dipstick from transmission.	_____	_____	_____
27. Insert flexible nylon dipstick correctly.	_____	_____	_____
28. Select the appropriate tank for the transmission fluid required.	_____	_____	_____
29. Select the DIPSTICK ONLY mode.	_____	_____	_____
30. Enter the correct quantity of ATF into the machine.	_____	_____	_____

Activity	Observe	Do	Certify
31. Press ENTER to start service when the alarm sounds.	_____	_____	_____
32. When the alarm sounds to start engine, CALL OUT: “Clear for zoom, Bay____!”	_____	_____	_____
33. Wait for response and start engine.	_____	_____	_____
34. Press ENTER on machine once engine is running.	_____	_____	_____
35. Press ENTER when the END SERVICE light comes on and the buzzer sounds.	_____	_____	_____
36. Check the transmission fluid level with the transmission dipstick.	_____	_____	_____
37. Adjust the ATF level if necessary.	_____	_____	_____
38. Once level is correct, press FINISH on machine, then press ENTER.	_____	_____	_____
AEC Cooler Mode			
39. Connect power cord to 12v DC battery.	_____	_____	_____
40. Allow the machine to power-up fully.	_____	_____	_____
41. Identify cooler line.	_____	_____	_____
42. Disconnect and attach appropriate adapters to the input and output connectors.	_____	_____	_____
43. Attach adapters to MULTIMODE cooler line selector valve assembly.	_____	_____	_____
44. Disconnect red line from dipstick nozzle assembly.	_____	_____	_____
45. Attach red line to male fitting on cooler line valve assembly.	_____	_____	_____
46. Select appropriate tank for transmission fluid required.	_____	_____	_____
47. Select the COOLER ONLY mode.	_____	_____	_____

Activity	Observe	Do	Certify
48. Enter the correct quantity of ATF into the machine.			
49. When the alarm sounds to start engine, CALL OUT: “Clear for zoom, Bay____!”			
50. Wait for response and start engine.			
51. Press ENTER on machine once engine is running.			
52. When the buzzer sounds and the END SERVICE light is illuminated, press ENTER to confirm.			
53. Check the transmission level with the dipstick.			
54. Adjust ATF as needed.			
55. Once level is correct, press FINISH on machine, then press ENTER.			

Task 4: Perform Serpentine Belt Replacement

Activity	Observe	Do	Certify
1. CALL OUT: “Serpentine belt replacement, Bay__!”			
2. Look up correct belt application.			
3. Make sure the engine is off.			
4. Determine what parts, if any, need to be moved or taken off in order to facilitate belt installation.			
5. Determine type of tensioner used: spring loader or lock-down.			
6. If spring loaded, use proper belt tensioning tool to release tension from belt.			
7. If lock-down, loosen locking bolts and release tension by backing off tensioner bolt.			

	Activity	Observe	Do	Certify
8.	Remove old belt.	_____	_____	_____
9.	Re-inspect old belt, and show to guest.	_____	_____	_____
10.	Check under hood diagram for belt routing. If there is none, look in last three pages of belt and hose application guide.	_____	_____	_____
11.	Install new belt, using correct routing.	_____	_____	_____
12.	Adjust belt, using either spring loaded tensioner or lock-down tensioner.	_____	_____	_____
13.	Check belt for fit, correct routing, and proper fit on pulleys. Reinstall anything that had to be removed in step 3.	_____	_____	_____
14.	CALL OUT: “Clear for zoom, Bay__!”	_____	_____	_____

Task 5: Perform Tire Rotation

	Activity	Observe	Do	Certify
1.	Check to see that the vehicle is under approved weight limit and escort guest(s) to waiting area.	_____	_____	_____
2.	Determine if you have the correct torque stick and impact socket for the year and make.	_____	_____	_____
3.	Does the vehicle require a key to remove rim or locking hub cap? Obtain from guest if needed.	_____	_____	_____
4.	Center the vehicle over the lift.	_____	_____	_____
5.	Identify the vehicle lift points.	_____	_____	_____
6.	Position adapters at the manufacturers recommended lift points. Use of rubber blocks, lift arms, height adapters or crossbars are used properly and when required.	_____	_____	_____
7.	CALL OUT: “Clear for lift, Bay__!”	_____	_____	_____

Activity	Observe	Do	Certify
8. Raise lift to the point of contact, STOP. Check all four points for any lifting problems (EXAMPLE: exhaust pipe, gas line, muffler, etc.) If all points are correct and solid, continue lifting. Observe vehicle for balance on the lift. Correct if needed.			
9. Lift to desired height and then lower vehicle slightly until lift contacts safety latches.			
10. Remove hub cap or centerpiece. Place to the side, out of the walking area, and in a safe location.			
11. Select the correct socket for lug nut removal. With the air gun, remove the lug nuts and place them in a container.			
12. Remove the tire from the vehicle.			
13. Remove the second tire in the same order as steps 2, 3, and 4 of the Lift Vehicle instructions.			
14. Rotate tires as outlined in detailed procedures.			
15. Reinstall the tire in its new position by fitting it onto the lugs and holding it around the outside surface only.			
16. Hand-install the first two lug nuts directly across from one another by hand.			
17. Hand start the remaining lug nuts and spin 2-3 turns by hand to ensure proper threading before using the impact.			

	Activity	Observe	Do	Certify
18.	Tighten lug nuts using the following method: <ul style="list-style-type: none"> Slowly tighten the lug nuts with the impact wrench until they are snug up to the wheel and then apply full power of the wrench. Use the correct torque stick to tighten all lug nuts in a star pattern. 	_____	_____	_____
19.	Request a second party check on the lug nuts and have someone observe while you tighten them a second time in a star pattern.	_____	_____	_____
20.	Replace the hub cap with the proper tool. Check that the valve stem is in the correct position in the hub cap.	_____	_____	_____
21.	CALL OUT: “Clear to lower, Bay__!”	_____	_____	_____
22.	Lower the vehicle all the way down.	_____	_____	_____
23.	Lower the lift completely to the floor.	_____	_____	_____
24.	Remove any adapters or swing away from the vehicle frame.	_____	_____	_____
25.	The vehicle is now ready for departure.	_____	_____	_____
26.	Follow Super-Pro [®] procedures for vehicle exit.	_____	_____	_____

Task 6: Perform VPS Entire Fuel System Cleaning

	Activity	Observe	Do	Certify
1.	Make sure the engine is off.	_____	_____	_____
2.	Detach air duct.	_____	_____	_____
3.	Spray Throttle Body Cleaner on the swab and clean deposits on the throttle plate and throttle body bore. Open the throttle plate to clean the backside of the plate.	_____	_____	_____

Activity	Observe	Do	Certify
4. If excessive cleaner has entered the engine during cleaning, hold throttle open and let residual evaporate before starting engine.			
5. Re-attach air duct.			
6. Double-check all air and electrical connections that were removed during service for proper installation.			
7. CALL OUT: “Clear for zoom, Bay__!”			
8. Ask guest to start engine.			
9. Let engine idle for one minute to remove solvent from throttle areas. Make sure engine is idling smoothly and at proper speed.			
10. Shut off engine.			
11. Prepare to clean air intake system.			
12. Locate correct vacuum hose, and disconnect.			
13. Install cone, and hang intake cleaner.			
14. CALL OUT: “Clear for zoom, Bay__!”			
15. Start the engine, and open the intake cleaner valve.			
16. When the intake cleaner is finished, close the valve and shut off the engine.			
17. Reattach the vacuum line.			
18. Make sure any other lines or hoses are reconnected.			
19. Add Fuel System Treatment to gas tank.			
20. Make sure gas cap is tight.			
21. Inform guest about post-service expectations.			

Task 7: Perform Air-Conditioning System Check and Re-Charge

Activity	Observe	Do	Certify
<i>Perform the A/C System Check</i>			
1. Complete oil change including second-party check.	_____	_____	_____
2. Be certain the vehicle is in PARK, and engine is OFF.	_____	_____	_____
3. Inspect the A/C system using the “A/C Service Decision Criteria” checklist. If the system fails any of the tests, do not perform the service. Inform the guest that repairs what repairs must be made before service can be performed.	_____	_____	_____
a. Check for working EZ Gauge, Identifier, Leak Detector.	_____	_____	_____
b. Use EZ Gauge to check that system pressure is >0.	_____	_____	_____
c. Visually examine the following for damaged or missing parts: <ul style="list-style-type: none"> • Hoses, Tubing, Connections • Compressor & Clutch • Condenser • Missing Caps • Service Port, Port Valve 	_____	_____	_____
d. Verify with Identifier that system is 134A.	_____	_____	_____
e. Using the <i>Cabin Air Filter Installation Manual</i> , remove the cabin air filter according to the vehicle’s specific procedure and inspect cabin air filter to ensure light will pass through 50% of surface.	_____	_____	_____
f. Check that fan/blower works on all speeds and dash controls work for HVAC.	_____	_____	_____
g. Check to see if cooling system fan(s) operate.	_____	_____	_____

Activity	Observe	Do	Certify
4. CALL OUT: “A/C Service, Bay ___!”			
5. Run system check using Refrigerant Identifier.			
6. Check Identifier window to see what refrigerant the vehicle’s A/C system contains.			
7. Inform the guest of the test results.			
<i>Perform the A/C Recharge</i>			
1. CALL OUT: “A/C Service, Bay___!”			
2. Set up and turn on the RHS780.			
3. Attach and open RED & BLUE valves per the vehicle manufacturer’s instructions.			
4. Determine correct system capacity and enter using the keypad.			
5. Using the keypad, answer each question posed by RHS780.			
6. When automatic sequencing has completed, close and disconnect RED & BLUE valves.			
7. Press RECYCLE/RECOVER to evacuate refrigerant from the hoses.			
8. CALL OUT: “Clear for zoom, Bay___!”			
9. Have the guest start the vehicle, or start it yourself if the guest is not present.			
10. Turn the vehicle’s A/C to maximum setting, and insert thermometer into cooling vent.			
11. While the vehicle is running, check for leaks using the leak detector.			

	Activity	Observe	Do	Certify
12.	Check that the temperature at the cooling vent has reached an acceptable temperature, and the high and low pressure gauges read acceptable pressure according to the ambient air temp, pressure relationship chart.			
13.	Turn off the vehicle.			

Task 8: Perform Battery Replacement

	Activity	Observe	Do	Certify
<i>Perform Starter and Charging System Test</i>				
1.	Make sure oil change has been completed.			
2.	Move to driver-side door. Make sure driver's window is open.			
3.	When prompted, ask guest to start engine.			
4.	Follow on screen prompts from ED18II.			
5.	Ask guest to turn off engine.			
6.	Press enter to display results.			
7.	Press back to print report and give to CSR. He or she will communicate the results to the guest.			

Perform Battery Replacement

1.	Verify proper battery is in stock.			
2.	Put on proper safety equipment.			
3.	Verify top-side water hose is connected and available.			
4.	Verify all vehicle accessories (radio, lights, etc.) are switched off.			
5.	Inspect condition of battery terminals and hold down. DO NOT CHANGE BATTERY IF THERE ARE LEAKS!			
6.	Determine type of battery.			

Activity	Observe	Do	Certify
7. Install memory saver into cigarette lighter. If indicator light does not come on, install memory saver under hood.			
8. On top terminal batteries, loosen bolts and remove terminals with puller. On side terminal batteries, remove bolts.			
9. Move battery cables away from battery to allow clearance for removal. DO NOT GROUND POSITIVE TERMINAL! Computer memory will be lost. Vehicle damage may occur.			
10. Remove battery hold down.			
11. Make sure battery caps are firmly seated.			
12. Attach battery carrier.			
13. Remove battery from vehicle.			
14. Clean terminals with proper battery brush.			
15. Clean battery box if necessary.			
16. Punch date code label on new battery.			
17. Attach battery carrier to new battery.			
18. Install new battery.			
19. Install battery hold down.			
20. Install battery terminals—POSITIVE terminal first.			
21. Remove memory saver.			
22. Spray terminals with sealer to prevent corrosion.			
23. Start the vehicle and check for proper operation.			
24. Attach battery carrier to old battery (core). Place core on core rack. **See Super-Pro10 Task 8 for Minnesota core handling procedures.			

Part 7: Automotive Systems



Learn On-Line: Fundamentals of Mechanics – The Combustion Engine

Before you continue, take a moment to learn about automotive systems on-line. Follow the steps below to take the *Fundamentals of Mechanics –The Combustion Engine* on-line course.

When you have completed the course, print the last page and give to your trainer during your next training meeting.

Accessing the Course:

Follow the instructions below to access the *Fundamentals of Mechanics – The Combustion Engine* course:

1. In the Address line of your internet browser, enter **www.learnvalvoline.com**.
2. Enter the user name and password provided by your manager.
3. Click the **Login** button. The VIOC University home page displays.

Taking the Course:

To take the course:

1. Click the **Technician** header to see available technician-level courses and tests.
2. Click the course title *Fundamentals of Mechanics – The Combustion Engine*. The course description displays.
3. Click the **Take Course** button. The course launches.
4. Take the course and close the course window.
5. To end your session in VIOC University On-line, click the **Logout** button located in the top right corner of your screen.

Learn On-Line: Automotive Systems

After completing this course you will be able to:

- Recognize how an automotive system works.
- Identify the critical parts of an automotive system.
- Identify the function each part performs in the automotive system.

Follow the directions described above and select *Automotive Systems* to take the course.

When you have completed the course, print the last page and give to your trainer during your next training meeting.

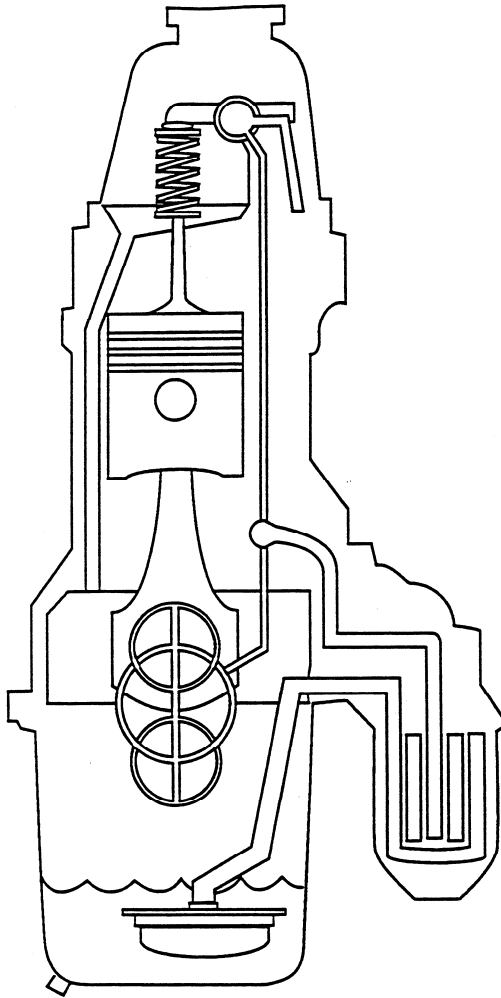


Automotive System Diagrams

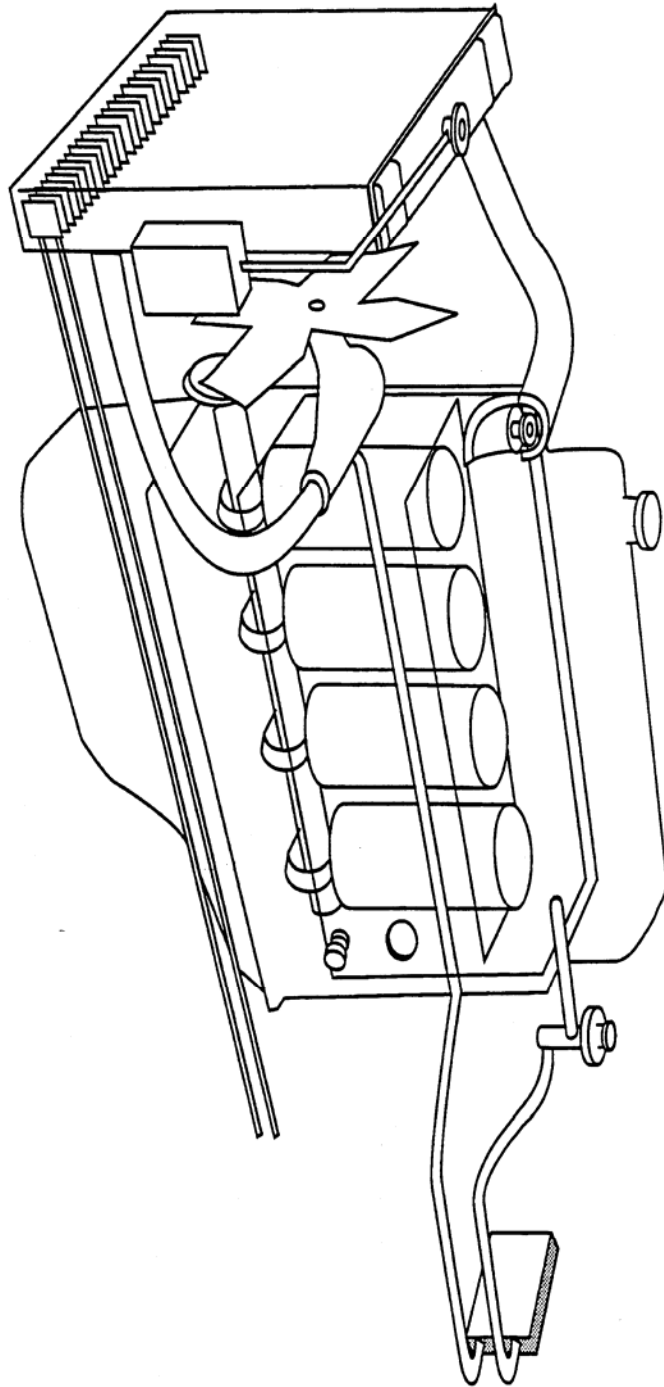
1. Oil Circulation
2. Cooling System

INSTRUCTIONS: Complete the diagrams on the following pages with your Trainer.

Oil Circulation Diagram



Cooling System Diagram



Part 8: Car Talk

Answer the following questions. After you're finished, discuss each question with your Trainer.

Exercises

- 1. How does it benefit the Service Center when we greet the guest pleasantly and professionally?**

- 2. Why is it important to review the work order with the guest clearly and professionally?**

- 3. What are the benefits to the guest of the following:**

- **Gearbox service?**

- **Air filter?**

- **Cooling system flush?**

- **Wiper blades?**

- **Transmission service?**

- 4. What does multi-viscosity oil mean?**

- 5. Explain the effect of temperature on power steering fluid.**

- 6. What does sun and heat do to wiper blades?**

- 7. Why do we recommend a water-to-antifreeze ratio of 50/50 in a cooling system?**

- 8. How is the water pump lubricated?**

- 9. What effect does a dirty air filter have on a vehicle's performance?**

- 10. List three items you check before doing a radiator flush.**

11. Why is it important to use the proper size replacement filter when replacing the air filter?

12. What happens if a master cylinder is filled with something other than brake fluid? How will this cause a mechanical problem?

13. When wiper blades begin to lay flat against a windshield, what should be done?

14. What does a milky-colored substance on an oil stick indicate?

15. Clear and loud communication between top-side and bottom-side Technicians helps with what?

16. What should you do when a car enters a Service Center, and you notice that the plug area on the oil drain pan is severely dented?

17. If you are going to drain and fill a manual transmission, what do you remove first?

18. How do you identify a limited slip differential?

19. What breaks down transmission fluid?

20. What should you do if a zerk does not take grease?

21. What are the criteria for changing a serpentine belt?

22. What does it mean if an oil filter looks enlarged after the zooms are completed?

23. What special tools do you use to lubricate zerks and joints that are hard to reach?

24. Where would you find the boiling point of 10w-30 DuraBlend[®] and what is it?

25. What should you do if you suspect that the oil filter is the wrong application?

26. Give an example of a transmission having a reverse pin. What should you do if you accidentally loosen a reverse pin on a transmission?

27. What is Type “FA” fluid?

28. How does your personal appearance affect your Service Center’s business?

29. Before lubricating the zerks, what do you need to do?

30. Why is it important to put a reminder sticker on each guest’s windshield?

31. Why is it important to put the oil cap on immediately after adding oil?

32. What should you do if a guest complains to you about your work?

33. What are Material Safety Data Sheets (MSDS), and where can they be found?

34. What should you do if you're not sure if a plug is a check plug or not?

35. What should you do if you notice a serious problem on a vehicle but VIOC does not service or check that problem?

36. Do we add fluid to Honda power steering reservoirs?

37. Under what circumstance might we install a non-OEM drain plug?

38. Why don't we replace Ford aluminum transfer case plugs with our regular differential plugs?

39. What happens if you use GL5 when GL4 is recommended?

40. What happens when a bad drain plug gasket is not replaced?

41. What happens when the improper amount of oil is put in a vehicle?

42. What could happen if a second check is not completed?

43. Why doe GM recommend 5W-30 for year-round driving?

44. Why do you wear oil resistant/slip resistant shoes?

45. Why are safety related items, such as fire exits, a first aid kit, and emergency number listings, located in your Service Center?

46. Why is it important to stand off to the side of a vehicle when guiding it into a bay?

47. What happens when you do not put on a new compression gasket when you replace Subaru drain plugs?

48. Why don't we top off brake fluid?

49. What are the guest benefits of using Valvoline® SynPower® synthetic motor oil?

50. What is extended life coolant?

51. What is the procedure for checking a Honda automatic transmission?

52. What can happen if you remove the transmission line at the radiator on 1995 and newer Dodge trucks?



Learn On-Line: Car Talk

Car Talk reviews information on the services and products offered at a VIOC Service Center. You will be required to answer at least 20 questions. You must get the first 20 questions correct to pass. If you get the first 20 questions correct the quiz will continue until you give a wrong answer. Three life lines are provided to give you a hint, but you are only allowed to use each life line once.

Accessing the Course:

Follow the instructions below to access the *Car Talk* course:

1. In the Address line of your internet browser, enter **www.learnvalvoline.com**.
2. Enter the user name and password provided by your manager.
3. Click the **Login** button. The VIOC University home page displays.

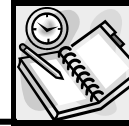
Taking the Course:

To take the course:

1. Click the **Technician** header to see available technician-level courses and tests.
2. Click the course title ***Car Talk***. The course description displays.
3. Click the **Take Course** button. The course launches.
4. Take the course and close the course window.
5. To end your session in VIOC University On-line, click the **Logout** button located in the top right corner of your screen.



Meet With Your Trainer 6



1. Ask any questions you may have about what you have read.

2. Answer the Trainer's questions about what you have just read.
3. Ask the Trainer for the Reference Materials needed to complete the exercises in Part 8.
4. Date and initial the Progress Chart at the front of the study guide. (Be sure your Trainer initials it also.) Then set a time for your next meeting on the line below.

(date/time)

Part 9: Using Service Center Reference Manuals

In this part you'll learn how to use the reference manuals in your Service Center, which include:

- Chek-Chart Reference Guides
- Valvoline[®] Filter Application Guide
- Valvoline[®] Belt and Hose Application Guide

These materials contain technical information in the following areas:

- Oil
- Oil filters
- Transmission/Transaxle
- Transfer case
- Differential
- Lubrication
- Cooling systems
- Turbochargers
- Parts/Extras
- Engines
- Miscellaneous

You'll use these manuals to make sure that guests' vehicles always receive the proper part and service.

To find out more about the reference guides:

Scan the *Valvoline[®] Filter Application Guide*, *Valvoline[®] Belt and Hose Application Guide*, and *Chek-Chart Reference Guide*.

Then answer the following questions; be sure to write down your responses.

- 1. What type of Valvoline[®] oil would you recommend for a 2000 Ford pickup turbo diesel?**

- 2. What is GLS fluid?**

3. Should you perform a cooling system flush on a 1993 Cadillac with a 4.9L engine? (If so, explain what you need to add.)

4. Can we top off a coolant system with extended life coolant?

5. What special step should be used when changing oil on any turbo-charged engines?

6. Should automatic transmission fluid be changed based on the appearance of the fluid? (YES or NO? Explain why.)

7. How do you read the oil dipstick on 1997 and newer Ford Expedition (4.6L & 5.4L) that hold six quarts?



Service Center Reference Manual Exercises

Answer the following questions using the appropriate reference manual in your Service Center.

- 8. Chevy Camaro 1998 5.7L MFI 6-Speed Manual
- 9. Ford F150 Pickup 2001 4.6L FI Automatic 4R70W
- 10. Chrysler LHS 1999 3.5L Automatic

For each vehicle listed above, identify the following parts:

- Oil filter # (VO)
- Air filter # (VA)
- Amount of oil
- Transmission fluid capacity (total fill)

Vehicle	VO	VA		Amount of Oil		Transmission Fluid Capacity
11.						
12.						
13.						

(Oil quantity is without filter.)

Look up the transmission fluid and capacities for each of the following vehicles. The answers may be different from the amount of fluid you would actually add:

Vehicle	Fluid	Capacity
14. 2000 Chevy Silverado 3500 Automatic 4L80E		
15. 1999 Ford Taurus Automatic AX4N		
16. 2006 Nissan Titan 2WD Manual		
17. 2001 Jeep Grand Cherokee Automatic		
18. 2004 Dodge Caravan Automatic		
19. 2005 Honda Accord 2.2L VTEC Manual		
20. 1996 Hyundai 1.8L Sonata Manual SOHC		
21. 1998 Toyota Tercel 1.5L Manual		
22. 1997 Mitsubishi Montero Sport 3.0L Automatic		

Look up the oil and air filters for the following vehicles:

Vehicle	Oil Filter	Air Filter
23. 2000 Buick Century 3.1L		
24. 1999 Honda Accord 2.3L		
25. 2001 Mercedes E320 3.2L		
26. 2002 Ford Focus 2.0(3) (DOHC)		

Look up the oil type/weight for the following vehicles:

Vehicle	Oil
27. 2002 Chevy Avalanche	
28. 2002 Nissan Altima	
29. 2001 Ford Mustang	
30. 1999 VW New Beetle	
31. 1997 Subaru Legacy	
32. 1998 Chrysler Sebring	

Look up the serpentine belt application for the following vehicles:

Vehicle	Belt
33. 1997 Chevy Cavalier 2.2L w/o air	
34. 1998 Chevy Astro Van 4.3L w/air	
35. 1998 Ford Windstar 3.8L w/air	
36. 1999 Dodge Dakota 3.9L w/air	
37. 2000 Audi A4 Quattro 1.8L w/o air	
38. 2001 Chrysler 300M 3.5L V-6 w/o air	
39. 2002 Ford Taurus 3.0L w/air	



Test Your Knowledge: Technician Comprehensive Test

Before you meet with your trainer, take a moment to test your SuperPro 10 knowledge. The Technician Comprehensive test consists of questions from all the SuperPro 10 tests you have taken so far. Follow the steps below to take the **Technician Comprehensive** test.

Accessing the Course:

Follow the instructions below to access the *Technician Comprehensive Test* course:

1. In the Address line of your internet browser, enter **www.learnvalvoline.com**.
2. Enter the user name and password provided by your manager.
3. Click the **Login** button. The VIOC University home page displays.

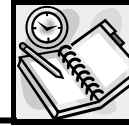
Taking the Course:

To take the course:

1. Click the **Technician** header to see available technician-level courses and tests.
2. Click the course title *Technician Comprehensive Test*. The course description displays.
3. Click the **Take Course** button. The course launches.
4. Take the course and close the course window.
5. To end your session in VIOC University On-line, click the **Logout** button located in the top right corner of your screen.



Meet With Your Trainer 7



1. Go over each Service-Center Reference Manual question with your Trainer. Be sure to discuss any questions you're having difficulty with.
2. Date and initial the Progress Chart at the front of the manual. (Be sure your Trainer initials it also.) Then set a time for your next meeting on the line below:



I,

(Name of Service Center Manager)

_____ **Recommend** _____ **Do Not Recommend***

(Name of trainee)

For Certification as Super-Pro® Technician

(Trainee's signature)

(Service Center Manager's signature)

(Date)

(Area Manager/Franchise Operations Manager's signature)

(Date)



* An Action Plan for Additional Training is attached.