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Ford Motor Company
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July 17, 2024

TO: All U.S. Ford and Lincoln Dealers

**SUBJECT: NEW VEHICLE RECOMMENDED DEMONSTRATION / DELIVERY HOLD
Customer Satisfaction Program 24B41**

Certain 2024 Model Year F-150 Vehicles Equipped With A 2.7L Engine - Powertrain Control Module (PCM) Reprogram and Air Conditioning Compressor Inspection

REF: Update Before Sale 24U07
Dated: May 24, 2024

PROGRAM TERMS

This program will be in effect through July 31, 2025. There is no mileage limit for this program.

EXPIRATION DATE

This Customer Satisfaction Program has an expiration date of July 31, 2025 to encourage dealers and customers to have this service performed as soon as possible.

We recommend dealers utilize their FSA VIN Lists' names and address to contact customers with affected vehicles. This will help minimize the number of vehicles that may have a loss of air conditioning, which requires a more extensive repair. FSA VIN Lists are expected to be available on July 17, 2024.

AFFECTED VEHICLES

Vehicle	Model Year	Assembly Plant	Build Dates
F-150 (2.7L Only)	2024	Dearborn	May 31, 2023 through April 10, 2024
		Kansas City	June 03, 2023 through April 04, 2024

US population of affected vehicles: 27,183. Affected vehicles are identified in OASIS and FSA VIN Lists.

Note: Some vehicles may be in the process of being repaired at the plant or Over the Air (OTA). Monitor OASIS before opening an RO and/or beginning a repair. Parts purchased for an FSA can be returned for credit if required. See the EXCESS STOCK RETURN details in Labor Allowances and Parts Ordering Information for more information.

REASON FOR THIS PROGRAM

In all of the affected vehicles, due to a certain PCM calibration error, air conditioning (A/C) compressor damage may result under high speed and high load operations.

Customers will experience a loss of A/C cooling in the vehicle in the event of a compressor failure. There are no cluster messages or warning lights to signal this malfunction.

SERVICE ACTION

NOTE: If applicable, perform FSA 24U07 first before attempting this program's repair.

It is recommended, before demonstrating or delivering any new in-stock vehicles involved in this program, dealers are to: Follow the Technical Instructions.

- Reprogram the Powertrain Control Module (PCM) using the Ford Diagnosis and Repair System (FDRS).
- Inspection: follow Technical Instructions to determine the correct repair with either A/C system flushing and/or part replacement.
- Only 5% of all vehicles are expected to need replacement parts.

This service must be performed on all affected vehicles at no charge to the vehicle owner. For new vehicle storage guidelines, refer to EFC13033, Storage Guidelines for New Vehicles.

Mobile Repair (for PCM reprogram and inspection) and/or Pick-up and Delivery: To assist vehicle owners to have this repair completed, dealers should:

- Arrange for a mobile repair at the owner's location, or
- Arrange to pick up the owner's vehicle and drive it to the dealership for repairs (rentals are authorized – see Rental Vehicles).
 - Re-deliver the owner's vehicle after repairs have been completed.
- Pick-Up & Delivery, and mobile service should be made available for all customers. Refer to the Rental and Claiming sections for further details.

GENERAL SERVICE TOOLS

NOTE: Review Technical Instructions for repair details.

NOTICE: Only the Rotunda A/C Flush and Purge Service Unit and Motorcraft® A/C System Flushing Solvent (YN-23), both listed below, are approved for use on Ford vehicles. No other flushing device or solvent is approved for flushing heat exchangers (A/C condenser, A/C evaporator). Use of any other flusher or solvent may cause damage to the A/C system and the service unit.

For more information, contact 1-800 ROTUNDA and choose option 2 to place an order to purchase.

Description	Rotunda Part Number
Master A/C flushing specialist package	258-90026
A/C Flush Machine with Dual Tank and Sound Silence™ Technology	258-40001
A/C Flush Adapter Kit 1 of 3	219-00082
A/C Flush Adapter Kit 2 of 3	219-00083
A/C Flush Adapter Kit 3 of 3	219-00084
A/C Flush Adapter Kit 1, 2, 3	219-00085
Motorcraft® A/C System Flushing Solvent	YN-23

OVER-THE-AIR (OTA) UPDATES (FORD / LINCOLN SOFTWARE UPDATE):

- In addition to you being able to update vehicles now using FDRS, Ford is planning to deploy an OTA software update in 2024.
- Before scheduling service for an OTA-capable vehicle, please verify through PTS that the FSA is still open (OASIS) and that the vehicle has not already received the OTA update.
 1. Verify FSA is still open by viewing the “Outstanding Field Service Actions” on the OASIS results page on PTS. (Note: If the OTA update was recently downloaded onto the vehicle the FSA may still show as open).
 2. If the FSA is still open in the Outstanding Field Service Actions section, proceed to the tab titled “Connected Vehicle”. In the “Over the Air Update 60-Day History”, you can determine if an OTA update occurred on the affected module by viewing the “Completion Status”, which should show “Campaign Successful”. The “Release Notes” will also indicate that the campaign was successfully downloaded onto the vehicle. (Note: the FSA may still show as open in the Outstanding Field Service Actions section of PTS even though the OTA update was successfully downloaded onto the vehicle. This FSA will eventually be removed from the Outstanding Field Service Actions screen of PTS.).

OWNER NOTIFICATION MAILING SCHEDULE

Owner letters are expected to be mailed the week of August 5, 2024. Dealers should repair any affected vehicles that arrive at their dealerships, whether or not the customer has received a letter.

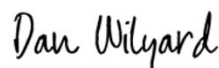
ATTACHMENTS

- Administrative Information
- Labor Allowances and Parts Ordering Information
- Technical Instructions
- Mobile Service Repair Assessment
- Mobile Repair/Vehicle Pick-Up & Delivery Record
- Owner Notification Letter

QUESTIONS & ASSISTANCE

For questions and assistance, contact the Special Service Support Center (SSSC) via the SSSC Web Contact Site. The SSSC Web Contact Site can be accessed through the Professional Technician System (PTS) website using the SSSC link listed at the bottom of the OASIS VIN report screen or listed under the SSSC tab.

Sincerely,



Dan Wilyard

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MOBILE SERVICE REPAIR ASSESSMENT LEVEL

- Inspections and Reprograming have the following assessment level:
🔧 🔧 - Light Mobile Service
- A/C system flushing and/or part replacements vehicles have the following assessment level:
🚫 - Not a Mobile Service Repair

MOBILE REPAIR RECOMMENDATIONS

- Confirm with the customer a mobile repair is feasible.
- Check OASIS before going to the customer's home or business to confirm if any other outstanding FSA needs to be completed.
- Transportation – due to the simplicity of this repair, a specialty vehicle is not required.

MOBILE REPAIR ADDITIONAL INFORMATION

Please ensure the technician brings the following to the mobile repair destination:

- Printed Technical Instructions.
- Printed Repair/Work Order or any other necessary documentation as customer copy(s)
 - Documents could also be emailed to the customer.
- Shirt/uniform and vehicle graphic with the dealership or Ford logos are recommended.

MOBILE REPAIR QUESTIONS AND ASSISTANCE

- For questions and assistance, contact the Special Service Support Center (SSSC) via the SSSC Web Contact Site. Work with Dealership warranty administrator to create a SSSC contact ID#.
- Once an SSSC agent responds to the new contact ID#, you may opt to call the SSSC hotline: (800) 325-5621.

OASIS ACTIVATION

OASIS will be activated on July 17, 2024.

FSA VIN LISTS ACTIVATION

FSA VIN Lists will be available through <https://web.fsavinlists.dealerconnection.com> on July 17, 2024. Owner names and addresses will be available by August 23, 2025.

NOTE: Your FSA VIN Lists may contain owner names and addresses obtained from motor vehicle registration records. The use of such motor vehicle registration data for any purpose other than in connection with this program is a violation of law in several states, provinces, and countries. Accordingly, you must limit the use of this listing to the follow-up necessary to complete this service action.

SOLD VEHICLES

- Owners of affected vehicles will be directed to dealers for repairs.
- Immediately contact any of your affected customers whose vehicles are not on your VIN list but are identified in OASIS. Give the customer a copy of the Owner Notification Letter (when available) and schedule a service date.
- Correct other affected vehicles identified in OASIS which are brought to your dealership.
- Dealers are to prioritize repairs of customer vehicles over repairs of new and used vehicle inventory.

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STOCK VEHICLES

- Correct all affected units in your new vehicle inventory before delivery.
- Use OASIS to identify any affected vehicles in your used vehicle inventory.

BRANDED / SALVAGED TITLE VEHICLES

Affected branded / salvaged title vehicles are eligible for this service action.

OWNER REFUNDS

Refunds are not approved for this program.

RENTAL VEHICLES

Restriction: Only allowed for inspection failures and compressor replacement.

Dealers are pre-approved for up to 2 days for a comparable rental vehicle. Follow Extended Service Plan (ESP) guidelines for dollar amounts. Rentals will only be reimbursed for the day(s) the vehicle is at the dealership for part replacement. Prior approval for more than 2 rental days is required from the SSSC via the SSSC Web Contact Site.

MOBILE REPAIR CLAIMING QUESTIONS

Dealers participating in the Remote Experience Program:

- Ford Dealers - refer to EFC14125, 2024 Remote Experience Program.
- Lincoln Retailers - refer to EFC14164, 2024 Remote Experience Program.

Dealers NOT participating in the 2024 Remote Experience Program:

- For questions and assistance, contact the Special Service Support Center (SSSC) via the SSSC Web Contact Site. Work with the Dealership warranty administrator to create an SSSC contact ID#.
- Once an SSSC agent responds to the new contact ID#, you may opt to call the SSSC hotline: (800) 325-5621.

PICK-UP & DELIVERY- Participating Dealers

Dealers participating in the Remote Experience Program:

- Ford Dealers - Refer to EFC14125, 2024 Remote Experience Program, Pick-Up & Delivery Offset section for additional details.

PICK-UP & DELIVERY- Non-participating Dealers

Ford Dealers not participating in the 2024 Remote Experience Program for Pick-Up & Delivery are authorized to claim unique services for completing this program.

- Dealers are authorized to claim one-half labor hour per repair for vehicle Pick-Up & Delivery services. Refer to Labor Allowances for details.
- Dealers must retain a Vehicle Pick-Up & Delivery Record with the repair order documentation.

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ADDITIONAL REPAIR (LABOR TIME AND/OR PARTS)

Additional repairs identified as necessary to complete the FSA should be managed as follows:

- For related damage and access time requirements, refer to the Warranty and Policy Manual / Section 6 – Ford & Lincoln Program Policies / General Information & Special Circumstances for FSAs / Related Damage.
- For vehicles within new vehicle bumper-to-bumper warranty coverage, no SSSC approval is required, although related damage must be on a separate repair line with the “Related Damage” radio button checked.
 - Ford vehicles – 3 years or 36,000 miles
- For vehicles outside new vehicle bumper-to-bumper warranty coverage, submit an Approval Request to the SSSC Web Contact Site before completing the repair.

CLAIMS PREPARATION AND SUBMISSION

- **Technician Competency Requirement:** The STST Competency 10 certification requirement in the U.S. market only will be enforced starting with repair orders opened on or after April 1, 2024. FSA repairs will reject if the repairing technician is not certified in STST Competency 10 FSA. See EFC14251 for more details.
- **Claim Entry:** Enter claims using Dealer Management System (DMS) or One Warranty Solution (OWS) online.
 - When entering claims:
 - Claim type 31: Field Service Action
 - Sub Code: **24B41**
 - Customer Concern Code (CCC): **C05** – A/C Does Not Work
 - Condition Code (CC): **42** – Does Not Operate Properly.
 - Causal Part Number: **19703**, Quantity **0**
 - For additional claims preparation and submission information, refer to the Recall and Customer Satisfaction Program (CSP) Repairs in the OWS User Guide.
- **Related Damage/Additional labor and/or parts:** Must be claimed as Related Damage on a separate repair line from the FSA with the same claim type and subcode as described in Claim Entry above.

IMPORTANT: Click the Related Damage Indicator radio button.
- **Pick-Up & Delivery:**
 - Dealers participating in the Remote Experience Program –
 - Refer to EFC14125, 2024 Remote Experience Program, Pick-Up & Delivery (PDL) Offset section for additional details.
 - Dealers NOT participating in the Remote Experience Program –
 - Dealers may claim one-half labor hour per repair for vehicle Pick-Up & Delivery services.
 - Dealers must retain a Vehicle Pick-Up & Delivery Record with the repair order documentation.

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- **Mobile Repair:**
 - Dealers participating in the Remote Experience Program –
 - Ford Dealers - refer to EFC14125, 2024 Remote Experience Program.
 - Lincoln Retailers - refer to EFC14164, 2024 Remote Experience Program.
 - Dealers NOT participating in the Remote Experience Program –
 - Mobile repair allowances can be claimed for dealer-performed mobile repairs. Dealers that are working with Ford-contracted mobile repair companies should refer to those companies for claiming instructions.
 - For dealer-performed mobile repairs, retain a copy of the Service Management signed record (see Repair Procedure Improvement & Revised Labor Time), with the repair order documentation.
 - Claim the mobile repair allowance Labor Operation Code **24B41MM** along with the applicable Labor Operation Code for the repair (refer to the Labor Allowances table in Labor Allowances and Parts Ordering Information).
- **Provision for Locally Obtained Supplies:** Includes YN-35 PAG oil (for seal/O-rings), Flush Machine inlet filtration cartridge, and miscellaneous shop supplies. Submit on the same line as the repair.
 - **NOTE:** The A/C Flush Machine Cartridge kit will service 100 vehicles and includes 4 Charcoal Exhaust Filters.
 - Program Code: **24B41**
 - Misc. Expense: OTHER
 - Misc. Expense: Claim up to **\$240.00** total

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LABOR ALLOWANCES

Description	Labor Operation	Labor Time
<p><u>Mobile or Dealer Visit:</u> PASS Cabin A/C Inspection: vents blow cold air. Reprogram the PCM to the latest level using the FDRS Cannot be claimed with NN</p>	24B41B	0.4 Hours
<p><u>Mobile or Dealer Visit:</u> FAIL Cabin A/C Inspection: vents do <u>NOT</u> blow cold air. PASS Compressor Clutch Inspection: rotates free. - Diagnose and Repair A/C issue <u>separate from this FSA</u> Reprogram the PCM to the latest level using the FDRS. Cannot be claimed with NN</p>	24B41C	0.4 Hours
<p>Mobile - FAIL / FAIL – see below under Mobile</p>	-	-
<p>FAIL Cabin A/C Inspection: vents do <u>NOT</u> blow cold air. FAIL Compressor Clutch Inspection: does <u>NOT</u> rotate. <u>**With A/C System Flush Machine ONLY**</u> Follow A/C Flushing Procedure (includes A/C compressor replacement) Reprogram the PCM to the latest level using the FDRS. Can be claimed with NN. Cannot be claimed with B or C.</p>	24B41D	4.8 Hours
<p>FAIL Cabin A/C Inspection: vents do <u>NOT</u> blow cold air. FAIL Compressor Clutch Inspection: does <u>NOT</u> rotate. A/C Component Replacement (includes A/C compressor replacement) - <u>Center Console</u> Vehicles ONLY Reprogram the PCM to the latest level using the FDRS. Can be claimed with NN. Cannot be claimed with B or C.</p>	24B41E	7.8 Hours
<p>FAIL Cabin A/C Inspection: vents do <u>NOT</u> blow cold air. FAIL Compressor Clutch Inspection: does <u>NOT</u> rotate. A/C Component Replacement (includes A/C compressor replacement) - <u>Without Center Console</u> Vehicles ONLY Reprogram the PCM to the latest level using the FDRS. Can be claimed with NN. Cannot be claimed with B or C.</p>	24B41F	7.7 Hours
<p>Vehicle Pick-Up & Delivery (PDL) Allowance: <u>Non-eligible Remote Experience Program Dealers Only</u> NOTE: Dealer-performed vehicle PDL and repairs only. Claim once</p>	24B41PP	0.5 Hours

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LABOR ALLOWANCES (continued)

Description	Labor Operation	Labor Time
Mobile Service Allowance: <u>Non-eligible Remote Experience Program Ford or Lincoln Dealers Only</u> If additional travel time is required, submit an SSSC Approval Form	24B41MM	0.5 Hours
<u>Mobile Inspections</u> FAIL Cabin A/C Inspection: vents do <u>NOT</u> blow cold air. FAIL Compressor Clutch Inspection: does <u>NOT</u> rotate. Do <u>NOT</u> reprogram the PCM at this time. Program stays OPEN for Dealer repair – Can only be claimed once	24B41NN	0.3 Hours

PARTS REQUIREMENTS / ORDERING INFORMATION

See Below

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PARTS REQUIREMENTS / ORDERING INFORMATION

Restricted Ordering: To place an order for K-Coded parts submit a VIN-specific Part Order contact via the SSSC Web Contact Site.

NOTE: Parts only required if inspections FAIL.

If inspections fail, there are 2 repair options:

Option 1: A/C flushing with part replacement (reuse condenser and evaporator)

Option 2: Part Only replacement

Option 1 – If A/C Flushing Machine Available					
	Service Part Number	Claim Quantity	Package Order Quantity	Number in Package	Description
K Code Restriction	ML3Z-19703-L	1	1	1	Compressor
	ML3Z-19A834-B	1	1	1	A/C Line 1 – Thermostatic Expansion Valve (TXV) Manifold Tube Assembly
	ML3Z-19972-AM	1	1	1	A/C line 2 - Low pressure, TXV Tube Assembly to Compressor Inlet
	ML3Z-19867-AL	1	1	1	A/C line 3 - High pressure, Compressor Outlet to Condenser
	HL3Z-19849-C	1	1	1	Thermostatic Expansion Valve (TXV)
	FC3Z-19C836-A	1	1	1	Desiccant Bag / Accumulator Assy
	DL3Z-19B596-B	1	1	1	Seal Kit - Compressor: Includes Gasket & O-Ring, 5/8"
	HL3Z-19B596-A	1	1	1	Kit 8 O-rings - 3/4", 1/2", 5/8" and 3/8"
	YN-23	1	1	Sell Pack 4	Motorcraft® A/C System Flushing Solvent 1 Gallon
	D9AZ-6731-A	1	1	1	FL-1A Spin-On Filter for AC Flush Machine, (1 Per Every Vehicle Repair with a Flush)
	YN-33-A	Claim as Misc. Other Up to \$240.00 Total			Motorcraft® R-1234yf Refrigerant NOTE: AC Flush Machine will filter refrigerant for re-use. Most repairs should NOT require extra refrigerant
	YN-35				Motorcraft® R-1234yf Refrigerant PAG Oil NOTE: Compressor comes oiled. Minimal oil required for install of O-ring seals
	258-40020				Inlet Filtration Cartridge Filter Set for Rotunda AC Flush Machine – (100 Repairs)

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PARTS REQUIREMENTS / ORDERING INFORMATION (continued)

NOTE: Parts only required if inspections FAIL

Option 2 – A/C System Part Replacement					
Service Part Number		Claim Quantity	Package Order Quantity	Number in Package	Description
K Code Restriction	ML3Z-19703-L	1	1	1	Compressor
	ML3Z-19A834-B	1	1	1	A/C Line 1 – TXV Manifold Tube Assembly
	ML3Z-19972-AM	1	1	1	A/C line 2 - Low pressure, TXV Tube Assembly to Compressor Inlet
	ML3Z-19867-AL	1	1	1	A/C line 3 - High pressure, Compressor Outlet to Condenser
KL3Z-19712-B		1	1	1	Condenser Assembly with Desiccant Bag
FL3Z-19E572-A		1	1	1	Seal - Condenser Dust Cover
ML3Z-19860-E or ML3Z-19860-F		1	1	1	Evaporator Core Assembly with TXV
W714409-S439		1	1	4	Bolt – Steering Shaft Assembly M8 x 32MM
W718633-S451		8	2	4	Screw / Washer - Seat Mounting M10 X 50
DL3Z-19B596-B		1	1	1	Seal Kit - Compressor: Includes Gasket & O-Ring, 5/8"
HL3Z-19B596-A		1	1	1	Kit 8 O-rings - 3/4", 1/2", 5/8" and 3/8"
YN-33-A		Claim as Misc. Other Up to \$240.00 Total			R-1234yf Refrigerant NOTE: 5 repairs per container
YN-35					Motorcraft® R-1234yf Refrigerant PAG Oil (7 oz Container) NOTE: Compressor comes oiled. Minimal oil required oil for install of O-ring seals

For restricted parts: Dealers will be notified via a DOES II communication if circumstances warrant a change in part supply strategy and when open ordering resumes.

For non-restricted parts: Order the parts through normal order processing channels. To guarantee the shortest delivery time, an emergency order for parts must be placed.

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DEALER PRICE

For the latest prices, refer to DOES II.

PARTS RETENTION, RETURN, & SCRAPPING

Follow the provisions of the Warranty and Policy Manual, Section 1 - WARRANTY PARTS RETENTION AND RETURN POLICIES. If a replaced part receives a scrap disposition, the part must be scrapped by all applicable local, state, and federal environmental protection and hazardous material regulations. Federal law prohibits selling motor vehicle parts or components that are under safety, compliance, or emissions recall.

EXCESS STOCK RETURN

The excess stock returned for credit must have been purchased from Ford Customer Service Division by Policy Procedure Bulletin 4000.

REPLACED FSA PARTS INSPECTION AND SIGN OFF

Effective March 1st, 2021, all parts replaced as part of an FSA repair with a repair order open date of March 1st, 2021, or later must be inspected and signed off on the repair order by a member of your dealer's fixed operations management team or an employee the task has been delegated to. If the task is to be delegated to a non-management employee, the employee needs to be someone other than the technician who completed the repair and needs to understand the importance of completing this task consistently and accurately.

- All parts replaced as part of an FSA repair should be returned to the parts department following the Warranty Parts Retention and Return Policies.
- Inspect the replaced parts to verify the FSA repair was completed.
- If the FSA repair is found to be complete, the designated employee signs the repair order line or parts return stamp area (electronic or hand signed) for the FSA repair indicating the parts were inspected and validated to have been replaced.
- After the parts have been inspected, they should be handled based on the guidance in the parts status report in the Online Warranty System (Hold, Return, CORE, Scrap, etc.). Please visit FMCDEALER > PARTS & SERVICE > WARRANTY ADMINISTRATION & WARRANTY PARTS RETURN for the latest [Immediate Scrap List](#) information.
- This process is subject to review during warranty audits for FSA repairs with a repair order open date of March 1st, 2021, or later. Any eligible FSA claims requiring parts replacement found not to have been inspected and signed off during a warranty audit will be subject to chargeback and consideration for enrollment into the Dealer Incomplete Recall Repair Process.

Note: Other approvals (electronic or handwritten) for add-on repair lines, dealer-owned vehicle repairs, and repeat repairs do not qualify as FSA parts inspection approvals. The post-repair FSA parts inspection process (electronic or handwritten) is independent of other warranty approval requirements. The approval by the designated employee implies that the FSA parts were found to be replaced and must be able to be identified on the Repair Order. If multiple FSAs require approval on a single Repair Order, each applicable occurrence will require individual post-repair approval by the designated employee.

CERTAIN 2024 MODEL YEAR F-150 VEHICLES EQUIPPED WITH A 2.7L ENGINE — POWERTRAIN CONTROL MODULE (PCM) REPROGRAM AND AIR CONDITIONING COMPRESSOR INSPECTION

SERVICE PROCEDURE

IMPORTANT! The Service Technician Specialty Training (STST) Competency 10 certification requirement, for U.S. market only, will be enforced starting with repair orders opened on or after April 1, 2024. Field Service Action (FSA) repairs will reject if the repairing technician is not certified in STST Competency 10 FSA. See Electronic Field Communication (EFC) 14251 for more details.

IMPORTANT! This procedure was modified from the original Workshop Manual (WSM) procedure. Follow technical instructions carefully. Each A/C component is to be removed before installing a new component to prevent contamination.

NOTE: If open in OASIS, it is recommended to perform **24U07** first before attempting this program's repair.

1. With the Key On Engine Running, set air conditioning (A/C) to MAX A/C **ON**. Idle for 1 minute.

- Does the air conditioning blow cold?

YES - Proceed to Powertrain Control Module (PCM) Programming on Page 7. Once the PCM programming is complete, this completes the FSA.

NO - Proceed to Step 2.



2. With the engine off, through the Right Hand (RH) wheel well, rotate the A/C compressor clutch by hand at least one revolution each direction. See Figure 1 and video link below.

• A/C compressor clutch rotation video link: [\[Video Link\]](#)

- Does the A/C compressor clutch rotate freely?

YES - Proceed to Powertrain Control Module (PCM) Programming on Page 7. Once the PCM programming is complete, diagnose the cabin A/C issue outside of this recall. This completes the FSA.

NO - Proceed to Step 3.

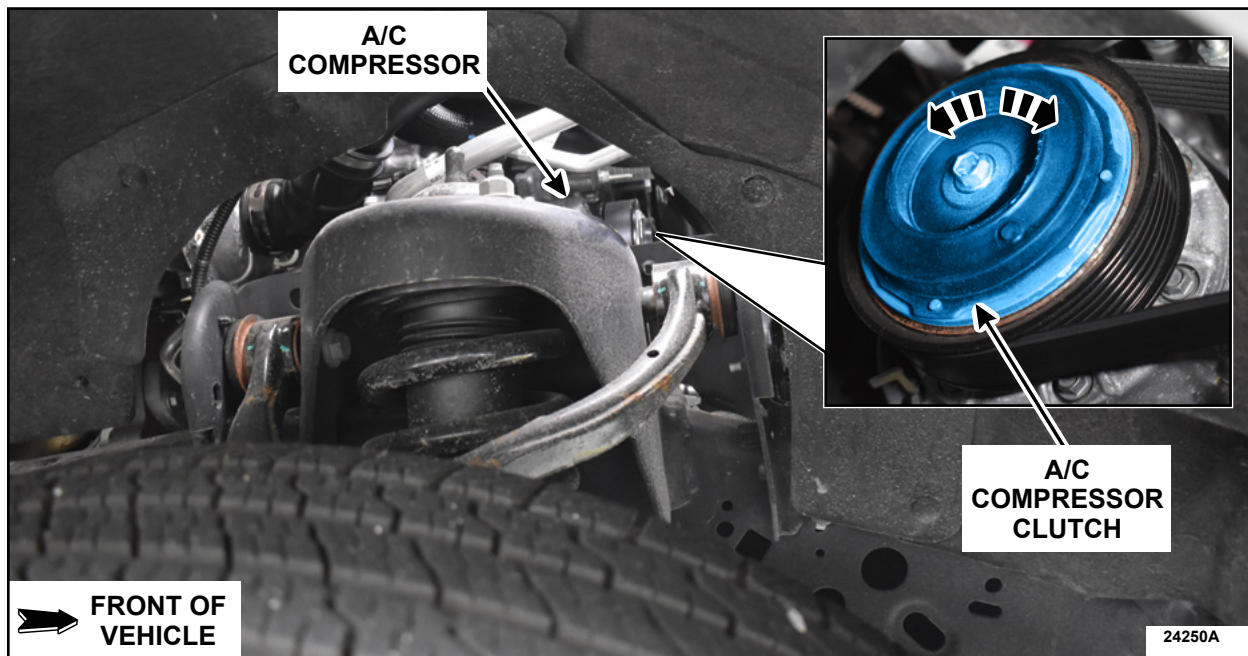


FIGURE 1

3. Does your dealership have a Rotunda A/C Flush and Purge Service Unit and fittings?

YES - Proceed to **A/C Flushing Procedure** on Page 4.

NO - Proceed to **A/C Component Replacement**.

A/C Component Replacement

NOTICE: Remove and discard ALL A/C system components as described BEFORE installation of new parts to avoid contamination and damage to the A/C system.

1. Remove and discard the components shown below. Follow the WSM procedures in Section 412-00.

- a. A/C Compressor
- b. Condenser including the Desiccant Bag
- c. A/C Compressor Inlet Line
- d. A/C Compressor Outlet Line
- e. Thermostatic Expansion Valve Manifold and Tube Assembly (Evaporator to Condenser)
- f. Evaporator with Thermostatic Expansion Valve



NOTE: Lubricate seals and o-rings with PAG oil before installation.

2. Install the *new* components shown below. Follow the WSM procedures in Section 412-00. Do not charge the A/C system at this time.

- a. Evaporator (Thermostatic Expansion Valve included)
- b. Thermostatic Expansion Valve Manifold and Tube Assembly (Evaporator to Condenser)
- c. A/C Compressor Outlet Line
- d. A/C Compressor Inlet Line
- e. Condenser (Desiccant Bag / Receiver Drier Element included)
- f. A/C Compressor (PAG oil included)

NOTE: DO NOT add PAG refrigerant oil during A/C system charging. The *new* compressor includes the correct amount of PAG refrigerant oil for the A/C system.

3. Charge the A/C system. Follow the WSM procedures in Section 412-00.

4. Proceed to Powertrain Control Module (PCM) Programming on Page 7. Once the PCM programming is complete, this completes the FSA.

IMPORTANT NOTE: Federal law prohibits selling motor vehicle parts or components that are under safety, compliance, or emissions recall. Unless a part is requested to be returned to Ford, all parts replaced under this FSA must be scrapped in accordance with all applicable local, state and federal environmental protection and hazardous material regulations. Refer to the Parts Retention, Return, & Scrapping section of the FSA dealer bulletin for further information.



A/C Flushing Procedure

IMPORTANT! This procedure was modified from the original Workshop Manual (WSM) procedure. Follow technical instructions carefully. Each A/C component is to be removed before installing a *new* component to prevent contamination.

NOTICE: Only the Rotunda A/C Flush and Purge Service Unit and Motorcraft® A/C System Flushing Solvent (YN-23), both listed below, are approved for use on Ford vehicles. No other flushing device or solvent is approved for flushing heat exchangers (A/C condenser, A/C evaporator). Use of any other flusher or solvent may cause damage to the A/C system and the service unit.

Flushing Equipment - General Equipment

Description	Rotunda Part Number
Master A/C flushing specialist package	258-90026
A/C Flush Machine with Dual Tank and Sound Silence™ Technology	258-40001
A/C Flush Adapter Kit 1 of 3	219-00082
A/C Flush Adapter Kit 2 of 3	219-00083
A/C Flush Adapter Kit 3 of 3	219-00084
A/C Flush Adapter Kit 1, 2, 3	219-00085
Motorcraft® A/C System Flushing Solvent YN-23	-

NOTICE: Use the Refrigerant Identification Equipment before recovering any of the vehicle's refrigerant. Failure to do so puts the shop's bulk refrigerant at risk of contamination. If the vehicle's A/C refrigerant is contaminated, refer the customer to the service facility that carried out the last A/C service. If the customer wishes to pay the additional cost, use the A/C recovery equipment that is designated for recovering contaminated A/C refrigerant. All contaminated A/C refrigerant must be disposed of as hazardous waste in accordance with all federal, state and local regulations. For all equipment, follow the equipment manufacturer procedures and instructions.

NOTICE: Before flushing the A/C system, remove and discard the components described below - Internal plumbing of these devices makes it impossible to correctly remove any residual-flushing agent. The 3.78L (1 gal) of Motorcraft® A/C System Flushing Solvent (YN-23) and FL1-A are intended for use on one vehicle only (A/C condenser/ evaporator core).

NOTICE: Only the A/C Flush and Purge Service Unit and Motorcraft® A/C System Flushing Solvent (YN-23) are approved for use on Ford vehicles. No other flushing device or solvent is approved for flushing heat exchangers (A/C condenser, A/C evaporator). Use of any other flusher or solvent may cause damage to the A/C system and the service unit.

NOTE: Prior to using the A/C Flush and Purge Service Unit for the first time, review the operating instructions. Refer to the One Rotunda Website / 258-40001 / Literature - for more information.

NOTE: Never push shop air directly through an a/c system. Shop air is full of contaminants and must be run through the service unit to clean and dry the air.



NOTE: Ford Motor Company has approved a procedure to provide technicians with a non-CFC method of flushing contaminated A/C system heat exchangers. The procedure allows the specific components to be cleaned and flushed. The types of contamination flushed include particle matter that results from A/C compressor or desiccant failure and gummy residue that can form when refrigerant oil is overheated during A/C compressor seizure. The flushing process is a 2-step procedure that involves using an A/C Flush and Purge Service Unit to:

- Back-flush the A/C system: Circulate the flushing solvent through the heat exchanger A/C condenser, A/C evaporator in the reverse direction of normal refrigerant flow.
- Remove the flushing solvent from the heat exchanger A/C condenser, A/C evaporator. In this step of the procedure the pressurized air 621-862 kPa (90-125 psi), that is connected to the service unit is used to push and evaporate any remaining flush solvent from the heat exchanger A/C condenser, A/C evaporator.

NOTE: DO NOT flush through the condenser integrated desiccant bag / receiver drier element (if equipped), TXV (if equipped) or hard A/C lines. Internal plumbing and material make-up of these components make it impossible to correctly remove foreign material or residual flushing solvent.

1. Remove and discard the components shown below. Follow the WSM procedures in Section 412-00.

- a. A/C Compressor
- b. Desiccant Bag
- c. A/C Compressor Inlet Line
- d. A/C Compressor Outlet Line
- e. Thermostatic Expansion Valve Manifold and Tube Assembly (Evaporator to Condenser)
- f. Thermostatic Expansion Valve

2. Flush the A/C Condenser for a minimum of 15 minutes.

3. Flush the A/C Evaporator for a minimum of 15 minutes.

NOTICE: Failure to successfully remove all residual solvent within the component can result in system damage when reconnected and operated.

4. Apply pressurized air 621-862 kPa (90-125 psi) to the service unit, purge each component for a minimum of 30 minutes.

- The 30-minute purge time is required to force and evaporate all residual solvent from the A/C system component.
- Dispose of the used flush solvent and filter in accordance with local, state and federal regulations.



NOTE: Lubricate seals and o-rings with PAG oil before installation.

5. Install the *new* components shown below. Follow the WSM procedures in Section 412-00. Do not charge the A/C system at this time.

- a. Thermostatic Expansion Valve
- b. Thermostatic Expansion Valve Manifold and Tube Assembly (Evaporator to Condenser)
- c. A/C Compressor Outlet Line
- d. A/C Compressor Inlet Line
- e. Desiccant Bag
- f. A/C Compressor (PAG oil included)

NOTE: DO NOT add PAG refrigerant oil during A/C system charging. The *new* compressor includes the correct amount of PAG refrigerant oil for the A/C system.

6. Charge the A/C system. Follow the WSM procedures in Section 412-00.

7. Proceed to Powertrain Control Module (PCM) Programming on Page 7. Once the PCM programming is complete, this completes the FSA.

IMPORTANT NOTE: Federal law prohibits selling motor vehicle parts or components that are under safety, compliance, or emissions recall. Unless a part is requested to be returned to Ford, all parts replaced under this FSA must be scrapped in accordance with all applicable local, state and federal environmental protection and hazardous material regulations. Refer to the Parts Retention, Return, & Scrapping section of the FSA dealer bulletin for further information.



Powertrain Control Module Programming

NOTE: Program appropriate vehicle modules before performing diagnostics and clear all Diagnostic Trouble Codes (DTCs) after programming. For DTCs generated after programming, follow normal diagnostic service procedures.

1. Connect a battery charger to the 12 Volt (V) battery.

- Use of a heavy-duty charger is recommended to maintain proper battery voltage during this procedure.

NOTE: Verify the negative cable of the charger is installed on a chassis or engine ground and not the 12V battery negative terminal to prevent the battery saver mode from activating on the vehicle.

NOTE: If the diagnostic software does not load or if the vehicle cannot be identified properly, make sure there is a good internet connection and the Vehicle Communication Module (VCM) is properly connected to the Data Link Connector (DLC).

2. Log into Ford Diagnostic and Repair System (FDRS).

NOTE: Vehicle information is automatically retrieved by the diagnostic software and a Network Test is run. Vehicle identification data appears on the screen when this is complete.

3. Click **Read VIN from Vehicle** or manually enter the Vehicle Identification Number (VIN).

NOTE: Available modules are shown on the left hand (LH) side of the screen and available procedures are listed on the right hand (RH) side of the screen. Modules that are communicating are highlighted in green.

4. Select **Toolbox** tab.

5. From the list on the LH side of the screen, select the **PCM**.

6. From the list on the RH side of the screen, select **PCM - Powertrain Control Module (BCM) Software Update**.

7. Click **RUN**. Follow all on-screen instructions carefully.

8. From the list on the RH side of the screen, select **Self-Test** and click **RUN**.

9. Click the **Run Selected Tests** button in the lower right.

10. Click the **Clear & Retest** button at the top of the screen to clear DTCs in all modules.

11. Disconnect the battery charger from the 12V battery once the programming has completed.

NOTE: Advise the customer this vehicle is equipped with an adaptive transmission shift strategy which allows the vehicle's computer to learn the transmission's unique parameters and improve shift quality. When the adaptive strategy is reset, the computer will begin a re-learning process. This re-learning process may result in firmer than normal upshifts and downshifts for several days.



Important Information for Module Programming

NOTE: When programming a module, use the following basic checks to ensure programming completes without errors.

- Make sure the 12V battery is fully charged before carrying out the programming steps and connect FDRS/scan tool to a power source.

NOTE: A good internet connection is necessary to identify the vehicle and to load the diagnostic software.

- Inspect the Vehicle Communication Module II (VCM II)/Vehicle Communication Module III (VCM III) or the Vehicle Communication and Measurement Module (VCMM) and the cables for any damage. Make sure scan tool connections are not interrupted during programming.
- A hardwired connection is strongly recommended.
- Turn off all unnecessary accessories (radio, heated/cooled seats, headlamps, interior lamps, HVAC system, etc.) and close doors.
- Turn the accessories back on after programming has completed.
- Disconnect/depower any aftermarket accessories (remote start, alarm, power inverter, CB radio, etc.).
- Follow all scan tool on-screen instructions carefully.
- Disable FDRS/scan tool sleep mode, screensaver, hibernation modes.
- Create all sessions key on engine off (KOEO). Starting the vehicle before creating a session will cause errors within the programming inhale process.

Recovering a module when programming has resulted in a blank module

- a. Disconnect the VCM II/VCM III or the VCMM from the data link connector (DLC) and your computer.
- b. After ten seconds, reconnect the VCMII/VCMIII or the VCMM to the DLC and the PC. Launch FDRS. The VCMII/VCMIII or the VCMM icon should turn green in the bottom right corner of the screen. If it does not, troubleshoot the FDRS to VCM connection.
- c. If you are using the same FDRS as the initial programming attempt, select the appropriate VIN from the Vehicle Identification menu. If you are using a different FDRS, select "Read VIN from Vehicle" and proceed through the Network Test.
- d. In the Toolbox menu, navigate to the failed module and Download/Run Programmable Module Installation (PMI). Follow the on-screen prompts. When asked if the original module is installed, select "No" and continue through the installation application.
- e. Once programming has completed, a screen may list additional steps required to complete the programming process. Make sure all applicable steps are followed in order.



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Mobile Service Repair Assessment

Assessment levels have been identified to help determine the ease of performing eligible mobile service repairs for a Field Service Action (FSA) outside of the dealership service facility.


Dealer Bulletin



Within the Administrative Information Attachment of the dealer bulletin a mobile service repair assessment level(s) will be provided. These assessment levels have been determined using the amount of time, equipment and labor identified to perform the intended service action.

Assessment Levels

-  - Mobile Reprogramming
-   - Light Mobile Service
-    - Enhanced Mobile Service
-     - Advanced Mobile Service
-  - Wheel and Tire Mobile Service
-  - Not a Mobile Service Repair

Description of each level that is used to determine the overall assessment.

-  – Mobile Reprogramming
 - Module Programming or similar type services
 - Minimum tools maybe required other than an **IDS/FDRS** setup
 - FDRS programming that requires internet connection (wi-fi or mobile hotspot)
 - Make sure vehicle has a charge port to ensure battery voltage is maintained during flashing of the module(s)
 - Repairs not greater than 1 hour in length (including time to wait for programming)

Note: The location will need a charging station or wall box to maintain the 12-volt battery.
-   – Light Mobile Service
 - Interior repair procedures that do not require seat, dash, or headliner removal
 - Under hood repairs that do not require large component removal
 - Exterior repairs that do not require large component/panel removal
 - Repairs may require standard hand tools (Access to a Technician starter kit or similar)

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 – Enhanced Mobile Service

- **A two-person process is required anytime a procedure requires work under the vehicle**
- Brake Inspection and Brake Repair/Replacement
- Limited Suspension Component replacement (no alignment)
- Under Vehicle access for limited repairs (no large component removal)
- Vehicle Check Up - VCU
- Pre-Delivery Inspection - PDI
- Used Car Inspection/Presale Inspection
- May require floor jack, jack stands, and impact tools

Note: Wheel lock may be required.

 – Advanced Mobile Service

- Fluid Exchange/Oil Change
- Light Repairs
- Brake Hydraulic Repairs

 – Wheel and Tire Mobile Service

- Tire Removal from Wheel
- Tire Balancing
- Tire Repair

Note: Specialized Mobile Service unit and equipment including Tire balancer and Tire Changer required.

 – Not a Mobile Service Repair

- Large component removal
- BEV Battery Replacement
- Requires a vehicle hoist – to complete the repair (more than inspection)
- Required vehicle alignment
- Requires significant vehicle disassembly
- Repairs greater than 2-3 hours
- Any repairs that require M-Time
- Includes a service procedure where the vehicle owner may be distressed about the state of their vehicle

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Mobile Repair / Vehicle Pick-Up and Delivery Record

VIN _____ received (check one):

- Mobile Repair
- Pick-up and/or delivery service

As outlined below for the **24B41** Field Service Action program.

Mobile Repair – Date: _____

OR

Pick-up – Date: _____

Delivery – Date: _____

Repair Order #

Repair Order Date

Service Manager Signature

Date