

## Computers and Control Systems: By Symptom

### Engine - Hard Cold Starts/Hesitation/Stalls On Start-Up

Article No.  
91-25-7

12/13/91

- ^ HARD COLD START - DURING INITIAL START-UP, IDLE OR DECEL - EFI ENGINES - SLUDGE IN THROTTLE BODY AND/OR IDLE AIR BY-PASS VALVE
- ^ HESITATION/STALLS - DURING INITIAL START-UP, IDLE OR DECEL - EFI ENGINES - SLUDGE IN THROTTLE BODY AND/OR IDLE AIR BY-PASS VALVE

FORD: 1983-87 EXP  
1983-91 ESCORT  
1984-90 MUSTANG, THUNDERBIRD  
1986-90 TAURUS  
1986-91 CROWN VICTORIA  
1988-90 TEMPO

LINCOLN-MERCURY: 1983-85 LN7  
1983-87 LYNX  
1984-88 CAPRI  
1984-90 COUGAR  
1986-90 CONTINENTAL, MARK VII, SABLE  
1986-91 GRAND MARQUIS, TOWN CAR  
1988-90 TOPAZ  
1991 TRACER

LIGHT TRUCK: 1985-90 BRONCO II, BRONCO  
1985-91 ECONOLINE, F-150-350 SERIES  
1985-92 RANGER  
1986-91 AEROSTAR  
1991 EXPLORER

ISSUE: Hard cold starts, hesitation and stalls on initial start-up or during idle or decel may be caused by sludge in the throttle body and/or idle by-pass valve. Sludge deposits or oil film on the throttle body bore and plate or the idle air by-pass valve may cause one or more of the following conditions.

- ^ Hard Cold Start
- ^ Stall On Initial Start-Up
- ^ Stall During Idle
- ^ Stall During Decel
- ^ Rough Idle
- ^ Rolling Idle
- ^ Hesitation During Acceleration

ACTION: A new idle air by-pass service kit (F2PZ-9F939-A) is now available for service use to correct sludge contamination concerns of the throttle bore and plate only. It eliminates the need to clean the majority of past model throttle body applications. Cleaning is not required on sludge tolerant throttle body designs released for 1991 and newer model years.

SERVICE KIT -9F939-		
APPLICATION CHART — EFI PORT FUEL INJECTION ENGINES		
<u>MODEL YEAR</u>	<u>CAR APPLICATION</u>	<u>ENGINE</u>
1983-85	ESCORT GT/LYNX, EXP/LN7	1.6L EFI
1986-87	ESCORT GT/LYNX, EXP	1.9L EFI
1988-90	ESCORT GT	1.9L EFI
1991	ESCORT/TRACER	1.9L EFI
1987-90	MUSTANG	2.3L EFI
1984-88	THUNDERBIRD/COUGAR, MUSTANG/CAPRI	2.3L TC
1988-90	TEMPO/TOPAZ	2.3L HO/HSC
1986-90	TAURUS/SABLE	3.0L EFI
1988-90*	TAURUS/SABLE	3.8L EFI
1988-90	THUNDERBIRD/COUGAR	3.8L EFI/SC
1988-90	CONTINENTAL	3.8L EFI
1986-91	CROWN VICTORIA/GRAND MARQUIS, TOWN CAR	5.0L EFI
1986-88	THUNDERBIRD/COUGAR	5.0L EFI
1986-87	CONTINENTAL, MARK VII	5.0L EFI
1986-90	MARK VII LSC, MUSTANG	5.0L HO
<u>MODEL YEAR</u>	<u>LIGHT TRUCK APPLICATION</u>	<u>ENGINE</u>
1985	BRONCO II	2.3L EFI
1985-90**	RANGER	2.3L EFI
1986-87	AEROSTAR	2.3L EFI
1986-92	RANGER/BRONCO II	2.9L EFI
1986-90	AEROSTAR	3.0L EFI
1990-91***	RANGER, EXPLORER, AEROSTAR	4.0L EFI
1987-90	F-SERIES/BRONCO	4.9L EFI
1987-90	ECONOLINE (WITHOUT REAR HEAT)	4.9L EFI
1985-90	F-SERIES/BRONCO, ECONOLINE	5.0L EFI
1988-90	F-SERIES/BRONCO	5.8L EFI
1987-91****	F-SERIES, ECONOLINE	7.5L EFI
NOT FOR USE ON THE FOLLOWING EFI ENGINE APPLICATIONS:		
1988-90	FESTIVA	1.3L EFI
1988-89	TRACER	1.6L EFI
1985-89	XR4Ti	2.3L TC
1988-89	SCORPIO	2.9L EFI
1989-90	PROBE	2.2L, 2.2L TC AND 3.0L EFI
1989-90	TAURUS	3.0L SHO
1987-90	ECONOLINE	4.9L EFI (WITH REAR HEAT)
1988-90	ECONOLINE	5.8L EFI
NOT APPLICABLE FOR 1991 MODEL YEAR EXCEPT WHERE LISTED		
NOT APPLICABLE FOR 1992 MODEL YEAR EXCEPT WHERE LISTED		
* CUT OUT HOOD INSULATION PAD, IF NECESSARY, TO AVOID POSSIBLE CONTACT WITH THE IABP SOLENOID.		
** 1990 MODEL YEAR BUILT BEFORE 5/90		
*** 1991 MODEL YEAR BUILT BEFORE 1/91		
**** 1991 MODEL YEAR ALL CALIBRATIONS EXCEPT 1-97A-R00, 1-98A-R00, 1-98B-R00, 1-98C-R00, 1-98E-R00 AND 1-98F-R00.		
TB-2432-A		

Figure 1

Install an idle air by-pass service kit (F2PZ-9F939-A) as applicable to provide a permanent correction for symptoms caused by throttle body sludge deposits. Refer to the instruction sheet included in the kit for installation details. Refer to Figure 1 for a specific application list of EFI (port fuel Injection) engines involved in this TSB article.

The idle air by-pass service kit (F2PZ-9F939-A) includes the following items.

^ One (1) Idle Adjust Spacer

^ Two (2) Gaskets

- ^ Two (2) Attaching Bolts
- ^ One (1) "Attention" Sticker
- ^ One (1) Instruction Sheet

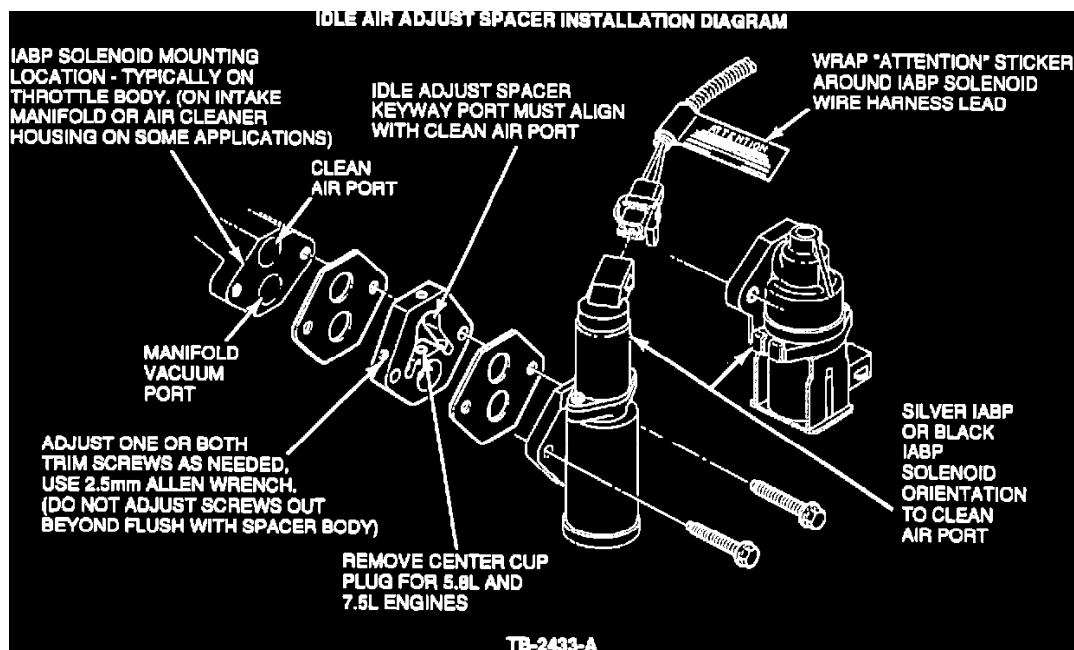


Figure 2

Refer to Figure 2 for a pictorial of the kits components.

NOTE: EFFECTIVE WITH THIS TSB, THROTTLE BODY CLEANING IS NO LONGER COVERED UNDER 5/50 EMISSIONS WARRANTY, UNLESS AS SPECIFIED IN THE FOLLOWING APPLICATION CHARTS. FAILURE TO FOLLOW THE CORRECT PROCEDURE MAY RESULT IN THE CLAIM BEING DISALLOWED.

The idle air adjust spacer incorporates sludge tolerant design features that eliminate throttle body sludge related conditions. Once installed, throttle body cleaning is not allowed and periodic adjustment of the throttle body is not required.