Idle Speed: By Symptom

Technical Service Bulletin # 91257

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.

MODEL YEAR	C	AR CATION	ENGINE
1963-65	ESCORT GT/LYNX, EXP.		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/COUGA	R. MUSTANG/CAPRI	2.3L TC
1988-90	TEMPO/TOPAZ		2.3L HO/HS
1986-90	TAURUS/SABLE		3.0L EFI
1988-90*	TAURUS/SABLE		3.8L EF1
1988-90	THUNDERBIRD/COUGA	R	3.8L EFI/SC
1988-90	CONTINENTAL		3.8L EFI
1986-91		ND MARQUIS, TOWN CAR	5.0L EFI
1986-88	THUNDERBIRD/COUGA		5.0L EFI
1986-87	CONTINENTAL, MARK V		5.0L EFI
1986-90	MARK VILLSC, MUSTAN		5.0L HO
			3.8E 110
MODEL	LIGHT	TRUCK	
YEAR		CATION	ENGINE
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, A	EROSTAR	4.0L EFI
1987-90	F-SERIES/BRONCO		4.9L EFI
1987-90	ECONOLINE (WITHOUT I	REAR HEAT)	4.9L EFI
1985-90	F-SERIES/BRONCO, ECO	DNOLINE	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 A	PPLICATIONS:	
1988-90	FESTIVA	1.3L EFI	
1988-89		1.6L EFI	
1985-89 1988-89	XR4Ti SCORPIO	2.3L TC	
1989-90	PROBE	2.9L EFI 2.2L, 2.2L TC AND 3.0L	EFI
1989-90	TAURUS	3.0L SHO	
1987-90	ECONOLINE	4.9L EFI (WITH REAR H	HEAT)
1988-90		5.8L EFI	
NOT APPLICABLE I	FOR 1991 MODEL YEAR EXCEPT FOR 1992 MODEL YEAR EXCEPT	WHERE LISTED	
ODEL YEAH BUILT	BEFORE 5/90 BEFORE 1/91	OID POSSIBLE CONTACT WITH TI 0, 1-98A-R00, 1-98B-R00, 1-98C-R0	



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

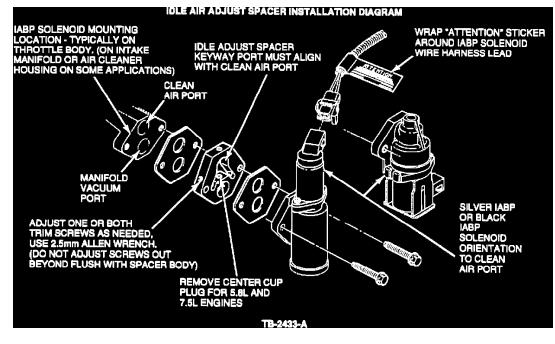


Figure 2

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.

Procedures, Warranty and Labor

CHECKS TO MAKE PRIOR TO SERVICE KIT INSTALLATION

Confirm that the following items are not causing the idle quality concern before proceeding with the service kit installation.

- Contamination within the idle air by-pass solenoid
- ^ Lack of fuel system control (excessively rich or lean)
- ^ Ignition timing change
- ^ Incorrect or malfunctioning EGR system
- ^ Incorrect or malfunctioning cooling system
- ^ Vacuum leaks (air intake manifold, vacuum hoses, vacuum reservoirs, power brake booster where applicable)
- ^ EEC diagnostics have been performed and vehicle malfunction indicated service output codes have been resolved and cleared.

If any of the areas listed above are found to be at fault, correct them before proceeding with the service kit installation.

Idle Speed Adjustment

WARNING: BEFORE PROCEEDING WITH THE IDLE SPEED ADJUSTMENT, VERIFY THAT THE FOLLOWING ITEMS ARE TAKEN CARE OF PROPERLY.

- ^ The transmission is in PARK or Neutral.
- ^ The parking brake is applied.
- ^ The wheels are properly blocked.
- ^ The engine is at operating temperature.
- ^ The heater, A/C, cooling fan and other accessories are OFF.

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	1983-1990 MOD	DEL YEARS —	PASSENGER	CAR — EFi	THROTTLE	BODY IDLE SPE	EED ADJUS	T PROCEDUR	ies
		1983-85 1.6L EFI	1986-90 1.9L HO	1984-88 2.3L TC	1987-90 2.3L OHC	1988-90 2.3L_HSC/HO	1986-90 3.0L EFI	1988-90 3.8L EFI/SC	1986-90 5.0L EFI/HO
1.	UNPLUG SPOUT LINE AND VERIFY THAT IGNITION TIMING IS BASE ±2° BTDC					×	x		
2.	REMOVE PCV HOSE AT VALVE AND INSTALL .2* DIAMETER ORIFICE TOOL T86P-9600-A					×	x		
3.	DISCONNECT IDLE AIR BYPASS SOLENOID CONNECTOR	x	x	x	×	X	x	x	X
4.	START ENGINE AND RUN AT: RPM/SEC	2000/60	2000/60	2000/120	1500/30	2500/30	<u>1989-90</u> 2000/30	<u>1988</u> 2500/30	<u>1986-88</u> 1800/30
5.	PLACE AUTO TRANS IN MANUAL IN NEUTRAL	DRIVE	PARK	PARK	PARK	DRIVE	DRIVE	PARK	DRIVE
6.	CHECK/ADJUST IDLE RPM: TURN THE SERVICE	SEE DECAL FOR	<u>1986-87</u> SEE DECAL	750	<u>1987-88</u> 525	A:1050 M:1575	<u>1966</u> 625	550	500
	SPACER TRIM SCREW TO (RPM)	BASE IDLE	<u>1988-90</u> 975		<u>1989-90</u> A:650 M:600		<u>1987</u> 700		
							<u>1988-90</u> 760		
7.	SHUT ENGINE OFF AND DISCONNEC BATTERY FOR 5 MIN, RECONNECT	т					x		X
8	ENGINE OFF, RECONNECT SPOUT LINE					X	x		
9.	REMOVE ORIFICE FROM PCV HOSE, RECONNECT TO PCV VALVE					x	x		
10	D. ENGINE OFF, RECONNECT IDLE AIR BYPASS SOLENOI CONNECTOR	X	x	x	x	x	x	x	X
11	. START ENGINE AND STABILIZE FOR 2 MIN, GOOSE ENGINE AND LET IT RETURN	X	X	x	X	x	X	X	X
		dle proble	M STILL EXIST	S, GO TO S	ECTION 2 OI	F H-MANUAL FC			
1k	2. ON AUTOMATIC OVERDRIVE TRANS, CHECK TV ADJUSTME	NT					X	X	X
				70 7	191-1				

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Figure 3

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	1985-1990 MQI	DEL YEARS	— LIGHT TRI	UCK — EFI T	HAOTTLE B	DDY IDLE SPE	ED ADJUST	PROCEDURE	8
		1985-90 <u>2.3L OHC</u>	1 965-90 2.91. EFI	1985-90 3.01. EFI	1990 4.0L EFI	1987-90 4.9L EFT	1985-90 5,0L EFI	1968-90 5.8L EFI	1987-90 7.5L EFI
1.	INSTALL FEELER GAUGE BETWEEN THROTTLE STOP SCREW & LEVER					<u>1989-90</u> 0.050"	1989-80 A:0.050" M:0.030"	<u>1969-90</u> 0.030"	
2.	UNPLUG SPOUT LINE AND VERIFY THAT IGNITION TIMING IS BASE ±2° BTDC	<u>1990</u> X		<u>1986-87</u> X		<u>1989-90</u> X	<u>1989-90</u> X	<u>1999-90</u> X	
3.	REMOVE PCV HOSE AT VALVE AND INSTALL 2* DIAMETER ORIFICE TOOL T86P-9600-A			<u>1986-67</u> X					
4.	DISCONNECT IDLE AIR BYPASS SOLENOID CONNECTOR	x	x	X	x	x	X	x	X
5.	START ENGINE AND RUN AT: RPM/SEC	<u>1985-87</u> 1500/20	<u>1986-87</u> 2000/120	<u>1988-90</u> 2500/30	2500/30	<u>1987-68</u> 1600/30	<u>1995-89</u> 1600/30	<u>1986</u> 1600/60	2500/30
6.	PLACE AUTO TRANS IN	<u>1988-90</u> 2500/30	<u>1988-90</u> 2500/30			<u>1997-89</u> DRIVE 1989-90	<u>1985-88</u> DRIVE 1989-90	<u>1968</u> DRIVE 1969-90	
	MANUAL IN NEUTRAL	PARK	PARK	DRIVE	PARK	PARK	PARK	PARK	PARK
7.	CHECK/ADJUST IDLE FIPM: TURN THE SERVICE SPACER TRIM	1985-87, <u>1989-90</u> 575	<u>1986</u> A:700 M:750	<u>1986</u> A:850 M:1040	675	<u>1987-88</u> A:550 M:850	<u>1985-88</u> A:550 M:650	<u>1888</u> A:575 M:600	650
	SCREW TO (RPM)	<u>1988</u> 625	<u>1987</u> A:700 M:650	<u>1987</u> A:900 M:1050		<u>1989</u> @650 #750	<u>1989-90</u> A:875 M:700	<u>1989-90</u> <u>A:C6</u> 760	
			<u>1988-90</u> 725	<u>1988-90</u> A:625 M:725		<u>1990</u> A:675 M:700	A	<u>1989-90</u> E4OD & MAN 730	
ο.	SHUT ENGINE OFF AND DISCONNECT BATTERY FOR 5 MIN, RECONNECT		x	×	x	×	x		
	REMOVE FEELER GAUGE					<u>1989-90</u> X	<u>1989-90</u> X	<u>1989-90</u> X	
10.	ENGINE OFF, RECONNECT SPOUT LINE	<u>1990</u> X		<u>1986-87</u> X		<u>1989-90</u> X	<u>1989-90</u> X	<u>1989-90</u> X	
	REMOVE ORIFICE FROM PCV HOSE, RECONNECT TO PCV VALVE			<u>1986-87</u> X					
12.	ENGINE OFF, RECONNECT IDLE AIR BYPASS SOLENOID CONNECTOR	x	x	x	X	x	x	x	×
	START ENGINE AND STABILIZE FOR 2 MIN, GOOSE ENGINE AND LET IT RETURN	x	X	×	X	X	×	×	×
	TO IDLE IF	IDLE PROBL	EM STILL EX	ISTS, GO TO	SECTION 2	OF H-MANUAL	FOR OTHER	POSSIBLE C	AUSES.
	ON AUTOMATIC OVERDRIVE TRANS, CHECK TV ADJUSTMENT					×	x		
@ #	1989 MODEL YEAR 4.9L (1989 MODEL YEAR 4.9L /	CALIBRATION	NS: 7-52ER-, CALIBRATION	7-52JR-, 7-52 S	:KR-, 7-52MR	-, 7-52QR-, 7-5	2RR-, 7-522R	-, 7-72JR-	

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	1991 CAR 1.9L EFI	1991 CAR 6.0L EFI	1991-92 TRUCK 2.9L EF1	1991 TRUCK 4.0L EFI	1991 TRUCK 7.5L EF1
1. ENGINE OFF, DISCONNECT THE NEGATIVE TERMINAL OF THE BATTERY FOR 5 MINUTES, RECONNECT BATTERY	×	x	X	×	×
2. DISCONNECT THE IDLE AIR BYPASS SOLENOID CONNECTOR	X	x	×	×	x
3. START THE ENGINE AND RUN AT RPM/SEC	2000/60	1800/30	2500/30	2500/30	2500/30
4. PLACE AUTOMATIC TRANSMISSION IN PARK, MANUAL IN NEUTRAL	x	DRIVE	×	×	X
5. CHECK/ADJUST IDLE RPM, TURN THE SERVICE SPACER TRIM SCREW TO (RPM)	650	500	700	675	650
8. SHUT ENGINE OFF AND DISCONNECT NEGATIVE TERMINAL OF THE BATTERY FOR 5 MINUTES			X	x	
7. ENGINE OFF, RECONNECT IDLE AIR BYPASS SOLENOID CONNECTOR	x	×	X	×	x
9. START ENGINE AND STABILIZE FOR 2 MINUTES, GOOSE ENGINE AND LET IT RETURN TO IDLEIF IDLE PROBLEM STILL EXI	x	x	x	x	x

The EFI throttle body idle speed adjustment procedures for the various model year passenger cars and light trucks are outlined in step-by-step procedures featured in Figures 3, 4 and 5. Select the appropriate procedure for the vehicle involved and adjust the throttle body idle RPM accordingly, after service kit installation.

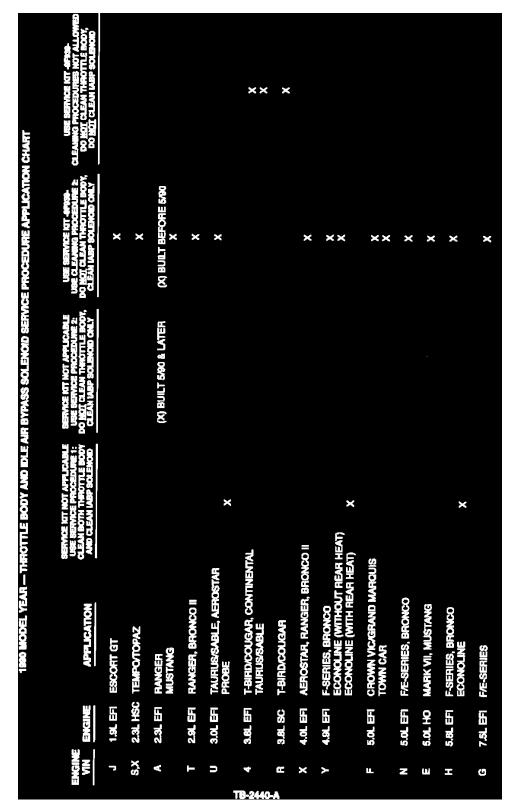
	THROT	ITLE BODY AND IDLE AIR BYPASS SOLI	ENOID SERVICE PROCEDURE AP	PLICATION CHART
ENGINE VIN		APPLICATION	SERVICE KIT NOT APPLICABLE USE SERVICE PROCEDURE 1: CLEAN BOTH THROTTLE BODY AND CLEAN IABP SOLENOID	USE SERVICE KIT -9F939- USE SERVICE PROCEDURE 2: DO <u>NOT</u> CLEAN THROTTLE BODY, CLEAN IABP SOLENOID ONLY
1983-85	MODEL YEAR			
J	1.6L EFI	1983-85 ESCORT GT/LYNX, EXP/LN7		x
w	2.3L T/C	1984-85 T-BIRD, MUSTANG/CAPRI		x
A	2.3L EFI	1985 RANGER/BRONCO II		x
Ν	5.0L EFI	1985 F/E-SERIES, BRONCO		x
1986 MC	DEL YEAR			
J	1.9L EFI	ESCORT GT/LYNX, EXP		x
Α	2.3L EFI	RANGER, AEROSTAR		x
w	2.3L T/C	T-BIRD/COUGAR, MUSTANG/CAPRI		x
т	2.9L EFI	RANGER, BRONCO II		x
U	3.0L EFI	TAURUS/SABLE, AEROSTAR		x
F	5.0L EFI	CROWN VIC/GRAND MARQUIS TOWN CAR, T-BIRD/COUGAR CONTINENTAL, MARK VII		x x x
Ν	5.0L EFI	F/E-SERIES, BRONCO		x
E	5.0L HO	MARK VILLSC, MUSTANG		x
1987 MO	DEL YEAR			
J	1.9L EFI	ESCORT GT/LYNX, EXP		x
Α	2.3L OHC	RANGER, AEROSTAR, MUSTANG		x
w	2.3L T/C	T-BIRD/COUGAR, MUSTANG/CAPRI		x
т	2.9L EFł	RANGER, BRONCO II		x
U	3.0L EFI	TAURUS/SABLE, AEROSTAR		x
Y	4.9L EFI	F-SERIES, BRONCO		×
Y	4.9L EFI	ECONOLINE (WITHOUT REAR HEAT) ECONOLINE (WITH REAR HEAT)	×	×
F	5.0L EFI	CROWN VIC/GRAND MARQUIS TOWN CAR, T-BIRD/COUGAR CONTINENTAL, MARK VII		x x x
N	5.0L EFI	F/E-SERIES, BRONCO		x
E	5.0L HO	MARK VII LSC, MUSTANG		x
G	7.5L EFI	F/E-SERIES		x
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Figure 6

1988	NODEL YEAH	- THROTTLE BODY AND IDLE AIR BY	PASS SOLENOID SERVICE PROC	EDURE APPLICATION CHART
ENGINE VIN	ENGINE	APPLICATION	SERVICE KIT NOT APPLICABLE USE BERVICE PROCEDURE 1: CLEAN BOTH THROTTLE BODY AND CLEAN IABP SOLENOID	USE SERVICE KIT -9F839- USE SERVICE PROCEDURE 2: DO <u>NOT</u> CLEAN THROTTLE BODY, CLEAN IABP SOLENOID ONLY
J	1.9L EFI	ESCORT GT		x
S,X	2.3L HSC	TEMPO/TOPAZ		x
A	2.3L EFI	RANGER, MUSTANG		×
W	2.3L T/C	T-BIRD		×
Т	2.9L EF I	RANGER, BRONÇO II		X
U	3.0L EF	TAURUS/SABLE, AEROSTAR		x
4	3.8L EFI	T-BIRD/COUGAR, CONTINENTAL TAURUS/SABLE		×××
C,R	3.8L SC	T-BIRD/COUGAR		x
Y	4.9L EFI	F-SERIES, BRONCO		×
		ECONOLINE (WITHOUT REAR HEAT) ECONOLINE (WITH REAR HEAT)	x	×
F	5.0L EFI	CROWN VIC/GRAND MARQUIS	×	· · · · · · · · · · · · · · · · · · ·
	J.VE EFI	TOWN CAR, T-BIRD/COUGAR		××
Ν	5.0L EFI	F/E-SERIES, BRONCO		x
Ē	5.0L HO	MARK VII LSC, MUSTANG		x
н	5.8L EFI	F-SERIES, BRONCO		x
		ECONOLINE	×	^
G	7.5L EFI	F/E-SERIES	· · · · · · · · · · · · · · · · · · ·	×
			-2438-A	~

Figure 7

PPLICATION CHART	LISE SERVICE KIT APRA. CLEANING PROCEDURES NOT ALLOWED (, DO <u>NOT</u> CLEAN THROTTLE BODY, DO <u>NOT</u> CLEAN IABP SOLENOID						××	×						
XLENOID SERVICE PROCEDURE A	USE SERVICE KIT AP89. USE SERVICE PROCEDURE 2: DO NOT CLEAN THROTTLE BODY, CLEAN IABP SOLENOD ONLY	×	×	×	X	×			xx	××	×	X		×
1989 MODEL YEAR — THROTTLE BODY AND IDLE AIR BYPASS SOLENOID SERVICE PROCEDURE APPLICATION CHART	SERVICE KIT NOT APPLICABLE USE SERVICE PROCEDURE 1: CLEAN BOTH THROTTLE BODY AND CLEAN LABP SOLENOID					OSTAR	NTINENTAL		жсо ИО РЕАЯ НЕАТ) ИПН ЯЕАЯ НЕАТ) Х	RAND MARQUIS			x	
1999 MODEL YEAR T	APPLICATION	ESCORT GT	TEMPO/TOPAZ	RANGER, MUSTANG	RANGER, BRONCO II	TAURUS/SABLE, AEROSTAR	T-BIRD/COUGAR, CONTINENTAL TAURUS/SABLE	T-BIRD/COUGAR	F-SERIES, BRONCO ECONOLINE (W/O RE/ ECONOLINE (WITH RE	crown vickgrand n Town car	F/E-SERIES, BRONCO	MARK VII, MUSTANG	F-SERIES, BRONCO Econoline	F/E-SERIES
	ENGINE	1.9L EFI	2.3L HSC	2.3L EFI	2.9L EFI	3.0L EFI	3.8L EFI	3.81.50	4.91, EFI	5.0L EF1	5.0L EFI	5.0L HO	5.8L EF1	7.51.67
	ENGINE	ſ	SX	¥	T	⊃ π	▼ 3-2439-/	C,F	٨	L	Z	ш	H	σ



			1991 MODEL YEAR — THROTTLE I	BODY AND IDLE AIR BYPASS SOL	L YEAR — THROTTLE BODY AND IDLE AIR BYPASS SOLENOID SERVICE PROCEDURE APPLICATION CHART	N CHAFT
ENGRE		<u>aventa</u>		SERVICE KIT NOT APPLICABLE USE SERVICE PROCEDURE 2: C Do NOT CLEAN THROTTLE BODY, CLEAN IABP SOLENOD ONLY	SERVICE KIT NOT APPLICABLE CLEANING PROCEDURES NOT ALLOWED DO NOT CLEAN THROTTLE BODY, DO NOT CLEAN JABP SOLENOID	USE SERVICE KT -9F89- USE SERVICE PROCEDURE 2: DO NOT CLEAN THROTTLE BODY CLEAN JABP SOLENOID ONLY
ſ		1.9L EFI	ESCORT/TRACER			x
SX		2.31 HSC	TEMPO/TOPAZ	X		
AM		2.3L EFI	RANGER, MUSTANG	х		
Т		2.9L EFI	RANGER			×
n		3.0L EFI	TAURUS/SABLE, AERO/RANGER PROBE	××		
4		3.8L EFI	T-BIRD/COUGAR, CONTINENTAL TAURUS/SABLE		××	
æ		3.8L SC	T-BIRD		X	
× TB-2		4.0L EFI	AEROSTAR, RANGER, EXPLORER	ER (X) BUILT 1/91 & LATER		(X) BUILT BEFORE 1/81
≩ 441-/		4.6L EFI	TOWN CAR		X	
>		4,9L EFI	F/E-SERIES, BRONCO	×		
Ľ		5.0L EFI	CROWN VICKGRAND MARQUIS			X
Z		5.0L EFI	F/E-SERIES, BRONCO	X		
U		5.0L HO	MARK VII, MUSTANG	X		
F		5.0L HO	T-BIRD/COUGAR		х	
H		5.8L EFI	F/E-SERIES, BRONCO	XA	XA	
Ŀ		7.0L EFI	F-SERIES	X		
Ð		7.5L EFI	F/E-SERIES	ХВ		X B/
NOTE:	:: A	SERVICE 1-54K-R1 PROCED	SERVICE KIT NOT APPLICABLE, <u>DO NOT</u> CI 1-84K-R10, 1-64K-R10, 1-64F-R10, 1-64F-R10 PROCEDURE 2 TO CLEAN IABP SOLENOID,	LEAN EITHER THROTTLE BODY OF 10, 1-754-R00, 1-768-R00, 1-768-R00 1 <u>0MLY</u> FOR ALL OTHER CALIBRATI	PPLICABLE, <u>DO NOT</u> CLEAN EITHER THROTTLE BODY OR IABP SOLENOID FOR CALIBRATIONS; 1-84E-R10, 1-84H-R10, 1-84J-R10, 0, 1-84P-R10, 1-64E-R10, 1-75A-R00, 1-76B-R00 AND 1-76C-R00. SERVICE KIT NOT APPLICABLE, USE SERVICE 1 EAN IABP SOLENOID <u>ONLY</u> FOR ALL OTHER CALIBRATIONS.	ME-R 10, 1 -6411-R 10, 1- 64J- R10, CABLE, USE SERVICE
	Ð	SERVI 1-98C CALIB	NOT AP 88E-R00 KS.	YCE PROCEDURE 2 TO CLEAN IAB Service Kit -9F839- and Servic	PLICABLE, USE SERVICE PROCEDURE 2 TO CLEAN IABP SOLENCID <u>CAN'Y</u> FOR CALIBRATIONS: 1-87A-R00, 1-88A-R00, 1-88B-R00, I AND 1-88F-R00. USE SERVICE KIT -8F839- AND SERVICE PROCEDURE 2 TO CLEAN IABP SOLENCID <u>CAN'Y</u> FOR ALL OTHER	0 7A-R00, 1-88A-R00, 1-88B-R00, ND <u>onil</u> y For all other

			1882 MODEL YEAR — THROTTL	E BODY AND IDLE AIR BYPASS SOL	YEAR — THRIOTTLE BODY AND IDLE AIR BYPASS SOLENOID SERVICE PROCEDURE APPLICATION CHART	N CHART
	ENGINE	ENGINE	APPLICATION	SERVICE KIT NOT APPLICABLE USE SERVICE PROCEDURE 2: DO NOT CLEAN THROTTLE BODY, CLEAN IABP SOLENOID ONLY	SERVICE KIT NOT APPLICABLE Cleaning procedures not allowed do <u>not</u> clean throttle body, do <u>not</u> clean labp solenoid	USE SERVICE KIT (1928) USE SERVICE PROCEDURE 2: DO <u>NOT</u> CLEAN THROTTLE BODY, CLEAN (ABP SOLENOID ONLY
	ŗ	1.9L EFI	ESCORT/TRACER		X	
	х's	2.3L HSC	TEMPO/TOPAZ		X	
	А,М	2.3L EF	RANGER, MUSTANG	X		
	T	2.9L EFI	RANGER			×
	n	3.0L EF]	taurus/sable, aeronangen Probe	ы Х	X	
TB	4	3.8L EFI	T-BIRD/COUGAR, CONTINENTAL TAURUS/SABLE	٩٢	××	
2442	œ	3.8L SC	Chirado Contrato Cont		X	
-8	×	4.0LEFI	AEROSTAR, RANGER, EXPLORER	ter X		
	M	4.6L EFI	CROWN VICKGRAND MARQUIS TOWN CAR		X	
	٢	4.91. EFI	F/E-SERIES, BRONCO	X		
	N	5.0L EFI	F/E-SERIES, BRONCO	X		
	ш	5.0L HO	MARK VII, MUSTANG	X		
	T	5.0L HO	T-BIRD/COUGAR		X	
	I	5.8L EFI	F/E-SERIES, BRONCO		X	
	ſ	7.01 EFI	F-SERIES	Х		
	G	7.5L EFI	F/E-SERIES	×		



THROTTLE BODY AND IDLE AIR BY-PASS SOLENOID SERVICE PROCEDURE

Detailed application charts for throttle body and idle air by-pass solenoid service procedures by engine VIN # /engine displacement/vehicle application and model year are shown in Figures 6 through 11. Refer to these charts to see if the service kit is to be installed and which service cleaning procedure, if any, is to be used.

SERVICE CLEANING PROCEDURES

The following items should be noted prior to beginning the service cleaning procedure.

Confirm that the correct service cleaning procedure is identified in the Application Charts, Figures 6-11, for the vehicle/engine combination being

serviced.

- ^ Do not clean throttle bodies identified to accept service kit (F2PZ-9F939-A), IDLE AIR ADJUST SPACER.
- [^] Use a 1" (25.4 mm) to 1-1/2" (38.1 mm) wire stemmed horse hair or nylon bottle cleaner type brush.
- ^ Use rubber gloves and eye protection.
- ^ Do not clean throttle bodies identified with a yellow/black "ATTENTION" label.
- ^ Do not clean "Black" plastic air by-pass valves. Refer to TSB 89-13-8 for service details.
- ^ Do not run vehicles with air flow meters when the air duct is removed.
- [^] Do not use carburetor cleaner as a cleaning solvent. Use Carburetor Tune-up Cleaner (D9AZ-19579-AA).

Procedure # 1

THROTTLE BODY AND IDLE AIR BY-PASS VALVE CLEANING

- CAUTION: DO NOT RUN VEHICLES EQUIPPED WITH AIR FLOW METERS DURING THE CLEANING PROCEDURE. IF THERE IS A YELLOW/BLACK "ATTENTION" LABEL ON THE THROTTLE BODY ADVISING NOT TO CLEAN, OR IF THE VEHICLE IS IDENTIFIED AS ACCEPTING SERVICE KIT (F2PZ-9F939-A), USE PROCEDURE # 2 FOR IDLE AIR BY-PASS VALVE CLEANING ONLY.
- 1. Plug the actuator into the connector in the Rotunda Cleaner/Tester, Tool 113-00009.
- 2. Remove the air duct to the throttle body inlet.
- 3. Disoonnect the idle air by-pass valve signal lead.
- 4. Attach the actuator harness plug to the idle air by-pass valve.
- 5. Start the actuator and then start the engine. Do not start engines that have air flow meters.
- 6. Spray just enough Carburetor Tune-up Cleaner (D9AZ-19579-AA) into the throttle bore to wet the bore and throttle plate.
- 7. Spray the Carburetor Tune-up Cleaner for about five (5) seconds into the idle air by-pass valve inlet passage while the actuator is operating.
- 8. Stop the engine and actuator. Let everything soak for fifteen (15) minutes.
- 9. After a fifteen (15) minute soak, saturate the cleaning brush with solvent and scrub between the throttle body bore and plate while holding the throttle wide open.
- NOTE: IT IS NECESSARY TO APPLY SOME PRESSURE ON THE BRUSH WHILE SCRUBBING.
- 10. Repeat saturating the brush and scrubbing for one (1) to two (2) minutes, making sure to reach into the corners where the throttle shaft meets the bore wall.
- 11. Start the actuator and the start the engine. Do not start engines that have air flow meters.
- 12. Spray Carburetor Tune-up Cleaner into the throttle bore for up to one (1) minute to wash away residue. Do not spray for longer than six (6) continuous seconds on engines that have air flow meters and are not running.
- 13. Spray Carburetor Tune-up Cleaner into the idle by-pass valve passage leading to the inlet of the valve for up to one (1) minute. Do not spray for longer than six (6) continuous seconds on engines that have air flow meters and are not running.
- 14. Stop actuator and stop engine, if running.
- NOTE: MAKE SURE THE THROTTLE PLATES OPERATE FREELY AND CLOSE PROPERLY.
- 15. Reinstall the air duct.
- 16. Start and run the engine for about one (1) minute to dry out the solvent residue.

- 17. Operate the actuator to make sure the solvent is purged from the idle by-pass valve.
- 18. Disconnect the actuator from the idle air by-pass valve.
- 19. Reattach the control signal lead to the air by-pass valve.
- 20. Check engine for normal operation. It may be necessary to reset the idle speed due to a previous adjustment for an idle concern. (Refer to the respective Powertrain/Emissions Diagnosis Service Manual, Throttle Body Section, for idle speed adjust procedure.)

Procedure # 2 Idle Air By-Pass Valve Cleaning Only

- CAUTION: THIS CLEANING PROCEDURE MAY BE USED WITH SLUDGE TOLERANT THROTTLE BODIES WHICH ARE IDENTIFIED WITH A YELLOW/BLACK "ATTENTION" LABEL AND THOSE USING SERVICE KIT (F2PZ-9F939-A). NO ATTEMPT SHOULD BE MADE TO CLEAN THROTTLE BODY BORE/PLATE AREA BY DIRECT SPRAYING OR SCRUBBING. DO NOT RUN VEHICLES WITH AIR FLOW METERS DURING CLEANING PROCEDURE.
- 1. Plug the actuator into the connector in the Rotunda Air By-Pass Valve Adapter 113-00009, or equivalent.
- 2. Remove the air duct to the throttle body inlet.
- 3. Disconnect the idle air by-pass valve signal lead.
- 4. Attach the actuator harness plug to the idle air by-pass valve.
- 5. Start the actuator and then start the engine.
- NOTE: DO NOT START ENGINES THAT HAVE AIR FLOW METERS.
- 6. Spray the Carburetor Tune-up Cleaner for about five (5) seconds into the idle air by-pass valve inlet passage while the actuator is operating.

CAUTION: AVOID DIRECT SPRAYING ON THROTTLE PLATE/BORE AREA.

- 7. Stop the engine and actuator. Let everything soak for fifteen (15) minutes.
- 8. Start the actuator and the start the engine.
- CAUTION: DO NOT START ENGINES THAT HAVE AIR FLOW METERS.
- 9. Spray Carburetor Tune-up Cleaner into the throttle bore for up to one (1) minute.
- CAUTION: DO NOT SPRAY FOR LONGER THAN SIX (6) CONTINUOUS SECONDS ON ENGINES THAT HAVE AIR FLOW METERS AND ARE NOT RUNNING.
- 10. Stop actuator and stop engine if running.
- 11. Reinstall the air duct.
- 12. Start and run the engine for about one (1) minute to dry out the solvent residue.
- 13. Operate the actuator to make sure the solvent is purged from the idle by-pass valve.
- 14. Disconnect the actuator from the idle air by-pass valve.
- 15. Reattach the control signal lead to the air by-pass valve.
- 16. Check engine for normal operation.
- NOTE: IT SHOULD NOT BE NECESSARY TO RESET THE IDLE SPEED SINCE ONLY THE IDLE AIR BY-PASS VALVE WAS SERVICED IN THIS PROCEDURE

Warranty Coverage

Throttle bodies and idle air by-pass valves on all EFI (Port Fuel Injection) engines through the 1992 model year that can be cleaned (as identified in the application charts) are covered under 5/50 Emissions Warranty Coverage.

For those throttle bodies identified as having sludge tolerant designs or using service kit (F2PZ-9F939-A) where cleaning is not allowed per the application charts, the warranty claims for cleaning will not be reimbursed even within the 12/12 warranty coverage period. Cleaning is not allowed. Service kit installation (single time) is covered under 5/50 emission warranty.

Labor Standards Operations

The labor operations shown in the following Operation/Description/Time columns are identified by procedure number and vehicle line. Specific engines for various vehicles are identified in the sludge cleaning procedure application charts. The throttle body cleaning operations with combinations and the air by-pass valve cleaning combinations will appear in future Labor Manuals under the following operation numbers.

- ^ 9926 B Throttle body and idle air by-pass valve cleaning
- ^ 9926 B2 Adjust idle speed
- ^ 9715 A Air by-pass valve cleaning only
- ^ 9715 A1 Adjust idle speed

PART NUMBER	PART NAME	CLASS
F2PZ-9F939-A	Idle Air By-pass Service Kit	B
D9AZ-19579-AA	Carburstor Tune-Up Cleaner	BG

OTHER APPLICABLE ARTICLES: 89-13-8 SUPERSEDES: 88-24-5, 88-24-6, 89-16-5, 91-10-9, 91-7-4

Operation Description

WARRANTY	STATUS: Eligible Under Warrant Coverage As Stated In Text Of This Article	
OPERATION	DESCRIPTION	TIME
912507A	Idle Air By-Pass Valve	0.5 Hr.
	Cleaning - 1983-85 Escort,	
	EXP, LN7, LYNX 1.6L EFI.	
912507B	Idle Air By-Pass Valve	0.5 Hr.
	Cleaning - 1986-91 Escort	
	1.9L EFI, 1986/87 EXP,	
	Lynx 1.9L EFI, 1991 Tracer	
	1.9L EFI.	
912507C	Idle Air By Pass Valve	0.5 Hr.
	Cleaning - 1984-87 Mustang	
	2.3L T/C, 1986/87 Capri,	
	Cougar 2.3L T/C, 1984-88	
	T-Bird 2.3L T/C, 1987/92	
	Mustang 2.3L EFI.	
912507D	Idle By-Pass Valve Cleaning	0.6 Hr.
	- 1988-91 Tempo, Topaz	
	2.3L HSC, 1985-92 Ranger	
	2.3L EFI.	
912507E	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1986/87	
	Aerostar 2.3L EFI, 1985	
	Bronco II 2.3L EFI.	
912507F	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1986-90 Bronco	
	II 2.9L EFI, 1986-92 Ranger	
	2.9L EFI.	
912507G	Idle Air By-Pass Valve	0.6 Hr.
	Cleaning - 1991/92 Probe	
	3.0L EFI, 1986-91 Taurus	
	3.0L EFI, 1987-91 Sable	
	3.0L EFI.	
912507H	Idle Air By-Pass Valve	0.7 Hr.

Cleaning - 1986-91 Aerostar 3.0L EFI, 1991 Ranger 3.0L EFI.

9125071	Idle Air By-Pass Valve Cleaning - 1988	0.6 Hr.
	Continental, Cougar, Taurus,	
	T-Bird, Sable 3.8L EFI.	
	1988 Cougar, T-Bird 3.8L S/C.	
912507J	Idle Air By-Pass Valve	0.7 Hr.
9120070	Cleaning - 1990-92	0., 111.
	Aerostar 4.0L EFI, 1990	
	Bronco II 4.0L EFI, 1991/92	
	Explorer 4.0L EFI, 1990-92	
012507V	Ranger 4.0L EFI.	0711.
912507K	Idle Air By-Pass Valve Cleaning - 1987-92 Bronco	0.7 Hr.
	4.9L EFI, 1987-92 F-Series	
	4.9L EFI, 1987/90	
	Econoline (Without Rear	
	Heater) 4.9L EFI, 1991/92	
0125071	Econoline (All) 4.9L EFI.	0 (11
912507L	Idle Air By-Pass Valve Cleaning - 1986-88 Cougar,	0.6 Hr.
	T-Bird 5.0L EFI, 1986-87	
	Continental, Mark VII 5.OL	
	EFI, 1986/91 Crn - Victoria,	
	Grn - Marquis 5.0L EFI,	
	1986-92 Mark VII 5.0L HO,	
01050714	1982-92 Mustang 5.0L HO.	0711
912507M	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1985-92 Bronco, E-Series, F-Series 5.0L EFI.	
912507N	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1988-90 Bronco,	
	F-Series 5.8L. 1991 Econo,	
	F-Series, Bronco 5.8L (Do	
	not Clean Solenoid, Calib;	10
	1-64E-R10, 1-64H-R10, 1-64J-F 1-64K-R10, 1-64M-R10, 1-64P-	
	1-64R-R10, 1-75A-R00, 1-76A-	
	1-76B-R00, 1-76C-R00.	
9125070	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1991/92 F And	
	B Series, 7.0L EFI.	
912507P	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1987-92 E-Series, F-Series 7.5L EFI.	
	E-Selles, F-Selles 7.5E EFI.	
912507Q	Throttle Body And Idle Air	0.9 Hr.
	By-Pass Valve Cleaning -	
	1989/90 Probe 3.0L EFI.	
912507R	Throttle Body And Idle Air	0.8 Hr.
	By-Pass Valve Cleaning -	
	1987-90 Econoline (With Rear Heat) 4.9L EFI.	
912507S	Throttle Body And Idle Air	0.9 Hr.
,120075	By-Pass Valve Cleaning -	0.5 111
	1988-90 Econoline 5.8L	
	EFI.	
912507T	Service Kit Install - All Cars	1.0 Hr.
	And Light Trucks (Except	
	Aerostar And Econoline) - Refer To The Service	
	Procedure Application	

Charts, For Vehicle Application.

912507U Service Kit Install - 1.2 Hr. Aerostar, Econoline -Refer To Service Procedure Application Charts - For Vehicle Application. DEALER CODING BASIC PART NO. 9E926 49 OASIS CODES: 602300, 607000, 607400, 607700, 608400, 611500, 618400

Technical Service Bulletin # 91257

Date: 911213

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.

MODEL YEAR	APPL	CAR ICATION	ENGINE
1963-65	ESCORT GT/LYNX, EX		1.6L EFi
1986-87	ESCORT GT/LYNX, EX		1.9L EFI
1988-90	ESCORT GT		1.9L EFI
1991	ESCORT/TRACER		1.9L EF
1987-90	MUSTANG		2.3L EFI
1984-88	THUNDERBIRD/COUG/	AR MUSTANG/CAPRI	2.3L TC
1988-90	TEMPO/TOPAZ		2.3L HO/HS
1986-90	TAURUS/SABLE		3.0L EFI
1988-90*	TAURUS/SABLE		3.8L EF
1988-90	THUNDERBIRD/COUG/		3.8L EFI/SC
1988-90	CONTINENTAL		3.8L EFI
1986-91		AND MARQUIS, TOWN CAR	5.0L EFI
1986-88			5.0L EFI
1986-87 1986-90	CONTINENTAL, MARK		5.0L EFI
1900-90	MARK VII LSC, MUSTAN		5.0L HO
MODEL YEAR			ENGINE
1985	BRONCO II		2.3L EFI
1985-90**	BANGER		
1985-90	AEROSTAR		2.3L EFI
1986-92			2.3L EFI
	RANGER/BRONCO II		2.9L EF!
1986-90	AEROSTAR		3.0L EFI
1990-91***	RANGER, EXPLORER, A	AEROSTAR	4.0L EFI
1987-90	F-SERIES/BRONCO		4.9L EFI
1987-90	ECONOLINE (WITHOUT	·	4.9L EFI
1985-90	F-SERIES/BRONCO, EC	ONOLINE	5.0L EFI
1988-90	F-SERIES/BRONCO		5.8L EFI
1987-91****	F-SERIES, ECONOLINE		7.5L EFI
NOT FOR USE ON		APPLICATIONS:	
1988-90	FESTIVA	1.3L EFI	
1988-89		1.6L EFI	
1985-89 1988-89	XR4TI SCORPIO	2.3L TC	
1989-90	PROBE	2.9L EFI 2.2L, 2.2L TC AND 3.	OL EFI
1989-90	TAURUS	3.0L SHO	
1987-90	ECONOLINE	4.9L EFI (WITH REAF	HEAT)
1988-90	ECONOLINE	5.8L EFI	
NOT APPLICABLE	FOR 1991 MODEL YEAR EXCEP FOR 1992 MODEL YEAR EXCEP	T WHERE LISTED	
IODEL YEAH BUILT	BEFORE 5/90 BEFORE 1/91	VOID POSSIBLE CONTACT WITH 00, 1-98A-R00, 1-98B-R00, 1-98C-	

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

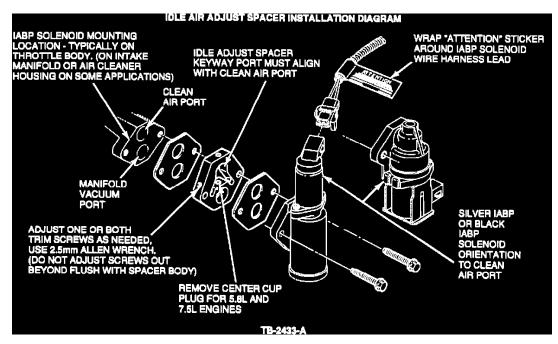


Figure 2

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.

Procedures, Warranty and Labor

CHECKS TO MAKE PRIOR TO SERVICE KIT INSTALLATION

Confirm that the following items are not causing the idle quality concern before proceeding with the service kit installation.

- ^ Contamination within the idle air by-pass solenoid
- ^ Lack of fuel system control (excessively rich or lean)
- ^ Ignition timing change
- Incorrect or malfunctioning EGR system
- ^ Incorrect or malfunctioning cooling system
- ^ Vacuum leaks (air intake manifold, vacuum hoses, vacuum reservoirs, power brake booster where applicable)
- ^ EEC diagnostics have been performed and vehicle malfunction indicated service output codes have been resolved and cleared.

If any of the areas listed above are found to be at fault, correct them before proceeding with the service kit installation.

Idle Speed Adjustment

- WARNING: BEFORE PROCEEDING WITH THE IDLE SPEED ADJUSTMENT, VERIFY THAT THE FOLLOWING ITEMS ARE TAKEN CARE OF PROPERLY.
- ^ The transmission is in PARK or Neutral.
- ^ The parking brake is applied.
- ^ The wheels are properly blocked.
- ^ The engine is at operating temperature.
- ^ The heater, A/C, cooling fan and other accessories are OFF.

1988 Ford Truck F 150 2WD Pickup L6-300 4.9LCopyright © 2009, ALLDATA9.90

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				-			_		
	1983-1990 MOD	DEL YEARS —	PASSENGER	CAR — EFI	THROTTLE	BODY IDLE SPI	EED ADJUS	T PROCEDUR	ES
		1983-85 <u>1.6L EFI</u>	1986-90 1.9L HO	1984-88 2.3L TC	1987-90 2.3L OHC	1988-90 2.3L_HSC/HO	1986-90 3.0L EFI	1988-90 3.8L EFI/SC	1986-90 5.0L EFI/HO
1.	UNPLUG SPOUT LINE AND VERIFY THAT IGNITION TIMING IS BASE ±2° BTDC					×	x		
2.	REMOVE PCV HOSE AT VALVE AND INSTALL .2" DIAMETER ORIFICE TOOL T86P-9600-A					×	x		
3.	DISCONNECT IDLE AIR BYPASS SOLENOID CONNECTOR	x	x	x	x	X	x	x	X
4.	START ENGINE AND RUN AT: RPM/SEC	200 0/60	2000/60	2000/120	1500/30	2500/30	<u>1989-90</u> 2000/30	<u>1988</u> 2500/30	<u>1986-88</u> 1800/30
5	, PLACE AUTO TRANS IN MANUAL IN NEUTRAL	DRIVE	PARK	РАЯК	PARK	DRIVE	DRIVE	PARK	DRIVE
6.	IDLE RPM: TURN THE SERVICE	FOR	<u>1986-87</u> SEE DECAL	750	<u>1987-88</u> 525	A:1050 M:1575	<u>1986</u> 625	550	500
	SPACER TRIM SCREW TO (RPM)	BASE IDLE	<u>1988-90</u> 975		<u>1989-90</u> A:650 M:600		<u>1987</u> 700 <u>1988-90</u> 760		
7.	SHUT ENGINE OFF AND DISCONNEC BATTERY FOR 5 MIN, RECONNECT	СТ					x		×
6.	ENGINE OFF, RECONNECT SPOUT LINE					x	×		
9.	REMOVE ORIFICE FROM PCV HOSE, RECONNECT TO PCV VALVE					x	x		
10	D. ENGINE OFF, RECONNECT IDLE AIR BYPASS SOLENOI CONNECTOR	X ID	x	x	x	x	x	x	X
11	I. START ENGINE AND STABILIZE FOR 2 MIN, GOOSE ENGINE AND LET IT RETURN TO IDLE IF I					X F H-MANUAL FC			X
12	2. ON AUTOMATIC OVERDRIVE TRANS, CHECK TV ADJUSTME			3, 60 10 3			X	X	X

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Figure 3

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	1985-1090 MQ	DEL YEARS -	— LIGHT TRI	JCK — EFI T	HAOTTLE BO	DDY IDLE SPE		PROCEDURE	3
		1095.00	1985-90	1986-90	1900	1987-90	1985-90	1968-90	
		2.3L OHC	<u>2.91 EFI</u>	3.0L EFI	<u>4.0L EFI</u>	4.9L EFT	5.0L EFI	<u>5.8L EFI</u>	1987-90 <u>7.5L EFI</u>
	INSTALL FEELER GAUGE BETWEEN THROTTLE STOP SCREW & LEVER					<u>1989-90</u> 0.050"	<u>1969-90</u> A:0.050" M:0.030"	<u>1959-90</u> 0.030"	
2.	UNPLUG SPOUT LINE AND VERIFY THAT IGNITION TIMING IS BASE ±2° BTDC	<u>1990</u> X		<u>1986-87</u> X		<u>1989-90</u> X	<u>1989-90</u> X	<u>1989-90</u> X	
3.	REMOVE PCV HOSE AT VALVE AND INSTALL 2* DIAMETER ORIFICE TOOL T86P-9600-A			<u>1988-67</u> X					
4.	DISCONNECT IDLE AIR BYPASS SOLENOID CONNECTOR	x	X	×	X	×	X	x	X
5.	START ENGINE AND RUN AT: RPM/SEC	<u>1985-87</u> 1500/20	<u>1986-87</u> 2000/120	<u>1988-90</u> 2500/30	2500/30	<u>1987-68</u> 1800/30	<u>1885-89</u> 1600/30	<u>1986</u> 1600/60	2500/30
6.	PLACE AUTO	<u>1888-90</u> 2500/30	<u>1988-90</u> 2500/30			<u>1987-88</u> DRIVE	<u>1985-88</u> DRIVE	<u>. 1988</u> DRIVE	
	TRANS IN MANUAL IN NEUTRAL	PARK	PARK	DRIVE	PARK	<u>1989-90</u> PARK	1969-90 PARK	1969-90 PARK	PARK
7.	CHECK/ADJUST IDLE RPM: TURN THE SERVICE	1985-87, <u>1989-90</u> 575	<u>1986</u> A:700 M:750	<u>1986</u> A:850 M:1040	675	<u>1987-66</u> A:550 M:850	<u>1985-88</u> A:550 M:650	<u>1988</u> A:575 M:600	650
	SPACER TRIM SCREW TO (RPM)	<u>1988</u> 625	<u>1987</u> A:700 M:650	<u>1987</u> A:900 M:1050		1989 @650 #750	<u>1989-90</u> A:675 M:700	<u>1989-90</u> <u>A:C6</u> 780	
	.		<u>1988-90</u> 725	<u>1988-90</u> A:625 M:725		<u>1990</u> A:675 M:700		<u>1889-90</u> :E4OD & MAN 730	
θ.	SHUT ENGINE OFF AND DISCONNECT BATTERY FOR 5 MIN, RECONNECT		×	x	x	×	×		
9.	REMOVE FEELER GAUGE					<u>1989-90</u> X	<u>1989-90</u> X	<u>1989-90</u> X	
10.	ENGINE OFF, RECONNECT SPOUT LINE	<u>1990</u> X		<u>1986-87</u> X		<u>1989-90</u> X	1989-90 X	<u>1989-90</u> X	
11.	REMOVE ORIFICE FROM PCV HOSE, RECONNECT TO PCV VALVE			<u>1986-87</u> X					
12.	ENGINE OFF, RECONNECT IDLE AIR BYPASS SOLENOID CONNECTOR	x	X	x	x	x	x	x	×
13.	START ENGINE AND STABILIZE FOR 2 MIN, GOOSE ENGINE AND LET IT RETURN TO IDLE IF	X IDLE PROBL	X EM STILL EX				X	×	×
	ON AUTOMATIC OVERDRIVE TRANS, CHECK TV ADJUSTMENT				SECTION 2	of H-Manual X	x	I POSSIBLE C	AUSES.
@#	1989 MODEL YEAR 4.9L (1989 MODEL YEAR 4.9L /	CALIBRATION ALL OTHER C	IS: 7-52ER-, ALIBRATION	7-52JR-, 7-52 S	KR-, 7-52MR	-, 7-52QR-, 7-5	2RR-, 7-52Z	1-, 7-72JR-	

TB-2436-A

	1991 CAR 1.9L EFI	1991 CAR 6.0L EFI	1991-92 TRUCK 2.9L EFI	1991 TRUCK 4.0L EFI	1991 TRUCK 7.5L EF1
1. ENGINE OFF, DISCONNECT THE NEGATIVE TERMINAL OF THE BATTERY FOR 5 MINUTES, RECONNECT BATTERY	x	x	x	×	×
2. DISCONNECT THE IDLE AIR BYPASS SOLENOID CONNECTOR	X	×	x	×	x
3. START THE ENGINE AND RUN AT RPM/SEC	2000/60	1800/30	2500/80	2500/30	2500/30
4. PLACE AUTOMATIC TRANSMISSION IN PARK, MANUAL IN NEUTRAL	X	DRIVE	x	×	×
5. CHECK/ADJUST IDLE RPM, TURN THE SERVICE SPACER TRIM SCREW TO (RPM)	650	500	700	675	650
8. SHUT ENGINE OFF AND DISCONNECT NEGATIVE TERMINAL OF THE BATTERY FOR 5 MINUTES			x	x	
7. ENGINE OFF, RECONNECT IDLE AIR BYPASS SOLENOID CONNECTOR	x	×	X	×	x
9. START ENGINE AND STABILIZE FOR 2 MINUTES, GOOSE ENGINE AND LET IT RETURN TO IDLEIF IDLE PROBLEM STILL EXI	x	x	×	x	x

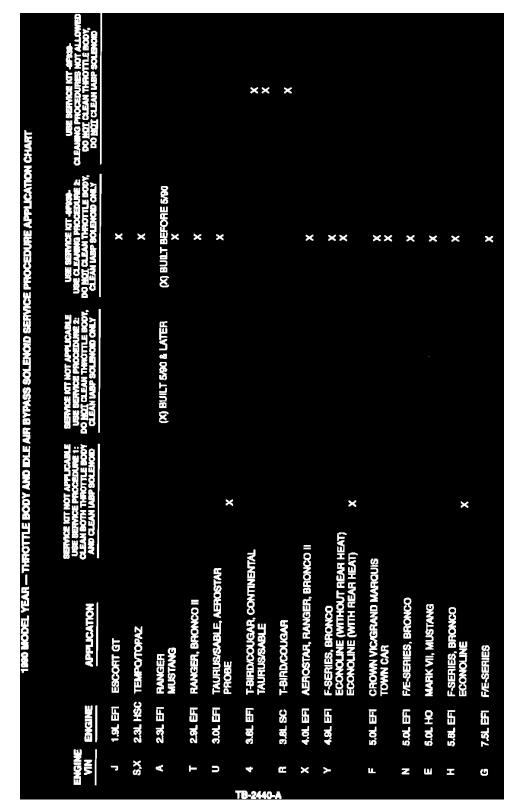
The EFI throttle body idle speed adjustment procedures for the various model year passenger cars and light trucks are outlined in step-by-step procedures featured in Figures 3, 4 and 5. Select the appropriate procedure for the vehicle involved and adjust the throttle body idle RPM accordingly, after service kit installation.

	THROT	TLE BODY AND IDLE AIR BYPASS SOLI	ENOID SERVICE PROCEDURE AP	
ENGINE VIN	ENGINE	APPLICATION	SERVICE KIT NOT APPLICABLE USE SERVICE PROCEDURE 1: CLEAN BOTH THROTTLE BODY AND CLEAN IABP SOLENOID	USE SERVICE KIT -9F939- USE SERVICE PROCEDURE 2: DO <u>NOT</u> CLEAN THROTTLE BODY, CLEAN IABP SOLENOID ONLY
1983-85 I	NODEL YEAR	15		
J	1.6L EFI	1983-85 ESCORT GT/LYNX, EXP/LN7		x
w	2.3L T/C	1984-85 T-BIRD, MUSTANG/CAPRI		x
A	2.3L EFI	1985 RANGER/BRONCO II		x
N	5.0L EFI	1985 F/E-SERIES, BRONCO		x
1986 MOL	DEL YEAR			
J	1.9L EFI	ESCORT GT/LYNX, EXP		x
Α	2.3L EFI	RANGER, AEROSTAR		x
w	2.3L T/C	T-BIRD/COUGAR, MUSTANG/CAPRI		x
т	2.9L EFI	RANGER, BRONCO II		x
U	3.0L EFI	TAURUS/SABLE, AEROSTAR		x
F	5.0L EFI	CROWN VIC/GRAND MARQUIS TOWN CAR, T-BIRD/COUGAR CONTINENTAL, MARK VII		x x x
Ν	5.0L EFI	F/E-SERIES, BRONCO		x
E	5.0L HO	MARK VII LSC, MUSTANG		×
1987 MOD	EL YEAR			
J	1.9L EFI	ESCORT GT/LYNX, EXP		×
A	2.3L OHC	RANGER, AEROSTAR, MUSTANG		×
w	2.3L T/C	T-BIRD/COUGAR, MUSTANG/CAPRI		x
т	2.9L EF/	RANGER, BRONCO II		x
U	3.0L EFI	TAURUS/SABLE, AEROSTAR		x
Y	4.9L EFI	F-SERIES, BRONCO		x
Y	4.9L EFI	ECONOLINE (WITHOUT REAR HEAT) ECONOLINE (WITH REAR HEAT)	×	×
F	5.0L EFI	CROWN VIC/GRAND MARQUIS TOWN CAR, T-BIRD/COUGAR CONTINENTAL, MARK VII		x x x
N	5.0L EFI	F/E-SERIES, BRONCO		x
E	5.0L HO	MARK VII LSC, MUSTANG		x
G	7.5L EFI	F/E-SERIES		x
		TB-24	437-A	

1988	Nodel Yeak	- THROTTLE BODY AND IDLE AIR BY	PASS SOLENOID SERVICE PROC SERVICE KIT NOT APPLICABLE	EDURE APPLICATION CHART USE SERVICE KIT -9F939-
ENGINE VIN	ENGINE	APPLICATION	USE BERVICE PROCEDURE 1: CLEAN BOTH THROTTLE BODY AND CLEAN IABP SOLENOID	USE SERVICE PROCEDURE 2: DO <u>NOT</u> CLEAN THROTTLE BODY, CLEAN JABP SOLENOID ONLY
J	1.9L EFI	ESCORT GT		x
S,X	2.3L HSC	TEMPO/TOPAZ		x
A	2.3L EFI	RANGER, MUSTANG		×
W	2.3L T/C	T-BIRD		×
Т	2.9L EFI	RANGER, BRONÇO II		×
U	3.0L EFI	TAURUS/SABLE, AEROSTAR		x
4	3.8L EFI	T-BIRD/COUGAR, CONTINENTAL		×
		TAURUS/SABLE		×
C,R	3.8L SC	T-BIRD/COUGAR		×
Y	4.9L EFI	F-SERIES, BRONCO		×
		ECONOLINE (WITHOUT REAR HEAT)		×
		ECONOLINE (WITH REAR HEAT)	×	
F	5.0L EFI	CROWN VIC/GRAND MARQUIS		×
		TOWN CAR, T-BIRD/COUGAR		×
N	5.0L EFI	F/E-SERIES, BRONCO		×
E	5.0L HO	MARK VII LSC, MUSTANG		×
E.	5.8L EFI	F-SERIES, BRONCO		×
		ECONOLINE	×	
G	7.5L EFI	F/E-SERIES		×
		ТВ	-2438-A	

Figure 7

PPLICATION CHART	LISE SERVICE KIT APRA. CLEANING PROCEDURES NOT ALLOWED (, DO <u>NOT</u> CLEAN THROTTLE BODY, DO <u>NOT</u> CLEAN IABP SOLENOID						××	×						
XLENOID SERVICE PROCEDURE A	USE SERVICE KIT AP89. USE SERVICE PROCEDURE 2: DO NOT CLEAN THROTTLE BODY, CLEAN IABP SOLENOD ONLY	×	×	×	X	×			xx	××	×	X		×
1989 MODEL YEAR — THROTTLE BODY AND IDLE AIR BYPASS SOLENOID SERVICE PROCEDURE APPLICATION CHART	SERVICE KIT NOT APPLICABLE USE SERVICE PROCEDURE 1: CLEAN BOTH THROTTLE BODY AND CLEAN LABP SOLENOID					OSTAR	NTINENTAL		жсо ИО РЕАЯ НЕАТ) ИПН ЯЕАЯ НЕАТ) Х	RAND MARQUIS			x	
1999 MODEL YEAR T	APPLICATION	ESCORT GT	TEMPO/TOPAZ	RANGER, MUSTANG	RANGER, BRONCO II	TAURUS/SABLE, AEROSTAR	T-BIRD/COUGAR, CONTINENTAL TAURUS/SABLE	T-BIRD/COUGAR	F-SERIES, BRONCO ECONOLINE (W/O RE/ ECONOLINE (WITH RE	crown vickgrand n Town car	F/E-SERIES, BRONCO	MARK VII, MUSTANG	F-SERIES, BRONCO Econoline	F/E-SERIES
	ENGINE	1.9L EFI	2.3L HSC	2.3L EFI	2.9L EFI	3.0L EFI	3.8L EFI	3.81.50	4.91, EFI	5.0L EF1	5.0L EFI	5.0L HO	5.8L EF1	7.51.67
	ENGINE	ſ	SX	¥	T	⊃ π	▼ 3-2439-/	C,F	٨	L	Z	ш	H	σ



		1891 MODEL YEAR — THROTTLE B S	BODY AND IDLE AIR BYPASS 801 Service kit not Applicable Live Service Bottennie 2.	EAR — THRIOTTLE BODY AND IDLE AIR BYPASS SOLENOID SERVICE PROCEDURE APPLICATION CHART Service kit not applicable service kit not applicable USE Inde Secure Bongen BP 2. (1 EANING PROCEDURES NOT ALLOWED USE SI	on chaat Use service kit - 8688- Use service procedure 2:
ENGBE VIN	ENGNE			DO NOT CLEAN THROTTLE BODY, DO NOT CLEAN THROTTLE BODY, DO NOT CLEAN ABP SOLENOID	DO NOT CLEAN THROTTLE BODY, CLEAN IABP SOLENOID ONLY
ſ	1.9L EFI	ESCORT/TRACER			x
SX	2.31 HSC	: TEMPO/TOPAZ	X		
AM	23L EFI	RANGER, MUSTANG	X		
ч	2.91. EFI	RANGER			×
n	3.0L EFI	TAURUSSABLE, AERORANGER PROBE	××		
4	3.8L EFI	T-BIRD/COUGAR, CONTINENTAL TAURUS/SABLE		××	
œ	3.8L SC	T-BIRD		×	
× TB-2	4.0LEFI	Aerostar, ranger, explorer	ir (X) Built 1/91 & later		(X) BUILT BEFORE 1/81
≩ 441-⁄	4.6L EFI	TOWN CAR		Х	
*	4,9L EFI	F/E-SERIES, BRONCO	X		
L	5.0L EFI	CROWN VIC/GRAND MARQUIS			X
Z	5.0L EFI	F/E-SERIES, BRONCO	X		
U	5.0L HO	MARK VII, MUSTANG	X		
⊢	S.OL HO	T-BIRD/COUGAR		Х	
H	5.8L EFI	F/E-SERIES, BRONCO	X	X	
ŗ	7.0L EFI	F-SERIES	Х		
9	7.51, EFI	F/E-SERIES	X B/		X B/
- BLCN	A SERVIO 1-64K-F PROCE B'SERVIO 1-98C-F CALIBR	SERVICE KIT NOT APPLICABLE, <u>DO NOT</u> CL 1-64K-R10, 1-54M-R10, 1-54F-R10 PROCEDURE 2 TO CLEAN IABP SOLENDID I SERVICE KIT NOT APPLICABLE, USE SERVI 1-98C-R00, 1-98E-R00 AND 1-39F-R00. USE § CALIBRATICONS.	LEAN EITHER THROTTLE BODY O 0, 1-754 ROO, 1-764 ROO, 1-768 HO ONLY FOR ALL OTHER CALIBRAT OE PROCEDURE 2 TO CLEAN IAE SERVICE KIT -9F339- AND SERVIC	(CABLE, DO NOT CLEAN ETHER THROTTLE BODY OR JABP SOLENOID FOR CALIBRATIONS; 1-64E-R10, 1-54H-R10, 1-54J-R10, 64P-R10, 1-64E-R10, 1-75A-R00, 1-76A-R00, 1-76B-R00 AND 1-76C-R00. SERVICE KIT NOT APPLICABLE, USE SERVICE NN JABP SOLENOID <u>ONLY</u> FOR ALL OTHER CALIBRATIONS. (CABLE, USE SERVICE PROCEDURE 2 TO CLEAN JABP SOLENOID <u>ONLY</u> FOR CALIBRATIONS; 1-67A-R00, 1-68A-R00, 1-68B-R00, ND 1-69F-R00. USE SERVICE KIT -6F839- AND SERVICE PROCEDURE 2 TO CLEAN JABP SOLENOID <u>ONLY</u> FOR ALL OTHER	64E-R10, 1-64H-R10, 1-64J-R10, Icable, USE Service 47A-R00, 1-98A-R00, 1-88B-R00, DID <u>ONLY</u> FOR ALL OTHER

T 5.0L HO T-BIRD/COUGAR H 5.8L EFI F/E-SERIES, BRONCO	× × × × × × × × × × × × × × × × × × ×
7.0L EFI	x
	~

Figure 11

THROTTLE BODY AND IDLE AIR BY-PASS SOLENOID SERVICE PROCEDURE

Detailed application charts for throttle body and idle air by-pass solenoid service procedures by engine VIN # /engine displacement/vehicle application and model year are shown in Figures 6 through 11. Refer to these charts to see if the service kit is to be installed and which service cleaning procedure, if any, is to be used.

SERVICE CLEANING PROCEDURES

The following items should be noted prior to beginning the service cleaning procedure.

Confirm that the correct service cleaning procedure is identified in the Application Charts, Figures 6-11, for the vehicle/engine combination being

serviced.

- ^ Do not clean throttle bodies identified to accept service kit (F2PZ-9F939-A), IDLE AIR ADJUST SPACER.
- [^] Use a 1" (25.4 mm) to 1-1/2" (38.1 mm) wire stemmed horse hair or nylon bottle cleaner type brush.
- Use rubber gloves and eye protection.
- ^ Do not clean throttle bodies identified with a yellow/black "ATTENTION" label.
- ^ Do not clean "Black" plastic air by-pass valves. Refer to TSB 89-13-8 for service details.
- ^ Do not run vehicles with air flow meters when the air duct is removed.
- [^] Do not use carburetor cleaner as a cleaning solvent. Use Carburetor Tune-up Cleaner (D9AZ-19579-AA).

Procedure # 1

THROTTLE BODY AND IDLE AIR BY-PASS VALVE CLEANING

- CAUTION: DO NOT RUN VEHICLES EQUIPPED WITH AIR FLOW METERS DURING THE CLEANING PROCEDURE. IF THERE IS A YELLOW/BLACK "ATTENTION" LABEL ON THE THROTTLE BODY ADVISING NOT TO CLEAN, OR IF THE VEHICLE IS IDENTIFIED AS ACCEPTING SERVICE KIT (F2PZ-9F939-A), USE PROCEDURE # 2 FOR IDLE AIR BY-PASS VALVE CLEANING ONLY.
- 1. Plug the actuator into the connector in the Rotunda Cleaner/Tester, Tool 113-00009.
- 2. Remove the air duct to the throttle body inlet.
- 3. Disoonnect the idle air by-pass valve signal lead.
- 4. Attach the actuator harness plug to the idle air by-pass valve.
- 5. Start the actuator and then start the engine. Do not start engines that have air flow meters.
- 6. Spray just enough Carburetor Tune-up Cleaner (D9AZ-19579-AA) into the throttle bore to wet the bore and throttle plate.
- 7. Spray the Carburetor Tune-up Cleaner for about five (5) seconds into the idle air by-pass valve inlet passage while the actuator is operating.
- 8. Stop the engine and actuator. Let everything soak for fifteen (15) minutes.
- 9. After a fifteen (15) minute soak, saturate the cleaning brush with solvent and scrub between the throttle body bore and plate while holding the throttle wide open.
- NOTE: IT IS NECESSARY TO APPLY SOME PRESSURE ON THE BRUSH WHILE SCRUBBING.
- 10. Repeat saturating the brush and scrubbing for one (1) to two (2) minutes, making sure to reach into the corners where the throttle shaft meets the bore wall.
- 11. Start the actuator and the start the engine. Do not start engines that have air flow meters.
- 12. Spray Carburetor Tune-up Cleaner into the throttle bore for up to one (1) minute to wash away residue. Do not spray for longer than six (6) continuous seconds on engines that have air flow meters and are not running.
- 13. Spray Carburetor Tune-up Cleaner into the idle by-pass valve passage leading to the inlet of the valve for up to one (1) minute. Do not spray for longer than six (6) continuous seconds on engines that have air flow meters and are not running.
- 14. Stop actuator and stop engine, if running.
- NOTE: MAKE SURE THE THROTTLE PLATES OPERATE FREELY AND CLOSE PROPERLY.
- 15. Reinstall the air duct.
- 16. Start and run the engine for about one (1) minute to dry out the solvent residue.

- 17. Operate the actuator to make sure the solvent is purged from the idle by-pass valve.
- 18. Disconnect the actuator from the idle air by-pass valve.
- 19. Reattach the control signal lead to the air by-pass valve.
- 20. Check engine for normal operation. It may be necessary to reset the idle speed due to a previous adjustment for an idle concern. (Refer to the respective Powertrain/Emissions Diagnosis Service Manual, Throttle Body Section, for idle speed adjust procedure.)

Procedure # 2 Idle Air By-Pass Valve Cleaning Only

- CAUTION: THIS CLEANING PROCEDURE MAY BE USED WITH SLUDGE TOLERANT THROTTLE BODIES WHICH ARE IDENTIFIED WITH A YELLOW/BLACK "ATTENTION" LABEL AND THOSE USING SERVICE KIT (F2PZ-9F939-A). NO ATTEMPT SHOULD BE MADE TO CLEAN THROTTLE BODY BORE/PLATE AREA BY DIRECT SPRAYING OR SCRUBBING. DO NOT RUN VEHICLES WITH AIR FLOW METERS DURING CLEANING PROCEDURE.
- 1. Plug the actuator into the connector in the Rotunda Air By-Pass Valve Adapter 113-00009, or equivalent.
- 2. Remove the air duct to the throttle body inlet.
- 3. Disconnect the idle air by-pass valve signal lead.
- 4. Attach the actuator harness plug to the idle air by-pass valve.
- 5. Start the actuator and then start the engine.
- NOTE: DO NOT START ENGINES THAT HAVE AIR FLOW METERS.
- 6. Spray the Carburetor Tune-up Cleaner for about five (5) seconds into the idle air by-pass valve inlet passage while the actuator is operating.

CAUTION: AVOID DIRECT SPRAYING ON THROTTLE PLATE/BORE AREA.

- 7. Stop the engine and actuator. Let everything soak for fifteen (15) minutes.
- 8. Start the actuator and the start the engine.
- CAUTION: DO NOT START ENGINES THAT HAVE AIR FLOW METERS.
- 9. Spray Carburetor Tune-up Cleaner into the throttle bore for up to one (1) minute.
- CAUTION: DO NOT SPRAY FOR LONGER THAN SIX (6) CONTINUOUS SECONDS ON ENGINES THAT HAVE AIR FLOW METERS AND ARE NOT RUNNING.
- 10. Stop actuator and stop engine if running.
- 11. Reinstall the air duct.
- 12. Start and run the engine for about one (1) minute to dry out the solvent residue.
- 13. Operate the actuator to make sure the solvent is purged from the idle by-pass valve.
- 14. Disconnect the actuator from the idle air by-pass valve.
- 15. Reattach the control signal lead to the air by-pass valve.
- 16. Check engine for normal operation.
- NOTE: IT SHOULD NOT BE NECESSARY TO RESET THE IDLE SPEED SINCE ONLY THE IDLE AIR BY-PASS VALVE WAS SERVICED IN THIS PROCEDURE

Warranty Coverage

Throttle bodies and idle air by-pass valves on all EFI (Port Fuel Injection) engines through the 1992 model year that can be cleaned (as identified in the application charts) are covered under 5/50 Emissions Warranty Coverage.

For those throttle bodies identified as having sludge tolerant designs or using service kit (F2PZ-9F939-A) where cleaning is not allowed per the application charts, the warranty claims for cleaning will not be reimbursed even within the 12/12 warranty coverage period. Cleaning is not allowed. Service kit installation (single time) is covered under 5/50 emission warranty.

Labor Standards Operations

The labor operations shown in the following Operation/Description/Time columns are identified by procedure number and vehicle line. Specific engines for various vehicles are identified in the sludge cleaning procedure application charts. The throttle body cleaning operations with combinations and the air by-pass valve cleaning combinations will appear in future Labor Manuals under the following operation numbers.

- ^ 9926 B Throttle body and idle air by-pass valve cleaning
- ^ 9926 B2 Adjust idle speed
- ^ 9715 A Air by-pass valve cleaning only
- ^ 9715 A1 Adjust idle speed

PART NUMBER	PART NAME	CLASS
F2PZ-9F939-A	Idle Air By-pass Service Kit	B
D9AZ-19579-AA	Carburstor Tune-Up Cleaner	BG

OTHER APPLICABLE ARTICLES: 89-13-8 SUPERSEDES: 88-24-5, 88-24-6, 89-16-5, 91-10-9, 91-7-4

Operation Description

WARRANTY	STATUS: Eligible Under Warrant Coverage As Stated In Text Of This Article	
OPERATION	DESCRIPTION	TIME
912507A	Idle Air By-Pass Valve	0.5 Hr.
	Cleaning - 1983-85 Escort,	
	EXP, LN7, LYNX 1.6L EFI.	
912507B	Idle Air By-Pass Valve	0.5 Hr.
	Cleaning - 1986-91 Escort	
	1.9L EFI, 1986/87 EXP,	
	Lynx 1.9L EFI, 1991 Tracer	
0125070	1.9L EFI.	0511.
912507C	Idle Air By Pass Valve	0.5 Hr.
	Cleaning - 1984-87 Mustang 2.3L T/C, 1986/87 Capri,	
	Cougar 2.3L T/C, 1980-87 Capit,	
	T-Bird 2.3L T/C, 1987/92	
	Mustang 2.3L EFI.	
912507D	Idle By-Pass Valve Cleaning	0.6 Hr.
	- 1988-91 Tempo, Topaz	
	2.3L HSC, 1985-92 Ranger	
	2.3L EFI.	
912507E	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1986/87	
	Aerostar 2.3L EFI, 1985	
	Bronco II 2.3L EFI.	
912507F	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1986-90 Bronco	
	II 2.9L EFI, 1986-92 Ranger	
	2.9L EFI.	0 6 77
912507G	Idle Air By-Pass Valve	0.6 Hr.
	Cleaning - 1991/92 Probe	
	3.0L EFI, 1986-91 Taurus	
	3.0L EFI, 1987-91 Sable	
912507H	3.0L EFI.	0.7 Hr.
91230/П	Idle Air By-Pass Valve	U./ ПГ.

Cleaning - 1986-91 Aerostar 3.0L EFI, 1991 Ranger 3.0L EFI.

	-	
912507I	Idle Air By-Pass Valve	0.6 Hr.
	Cleaning - 1988 Continental, Cougar, Taurus,	
	T-Bird, Sable 3.8L EFI.	
	1988 Cougar, T-Bird 3.8L	
0125071	S/C. Idle Air Dy Degg Value	0711.
912507J	Idle Air By-Pass Valve Cleaning - 1990-92	0.7 Hr.
	Aerostar 4.0L EFI, 1990	
	Bronco II 4.0L EFI, 1991/92	
	Explorer 4.0L EFI, 1990-92	
	Ranger 4.0L EFI.	
912507K	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1987-92 Bronco 4.9L EFI, 1987-92 F-Series	
	4.9L EFI, 1987/90	
	Econoline (Without Rear	
	Heater) 4.9L EFI, 1991/92	
	Econoline (All) 4.9L EFI.	
912507L	Idle Air By-Pass Valve	0.6 Hr.
	Cleaning - 1986-88 Cougar,	
	T-Bird 5.0L EFI, 1986-87 Continental, Mark VII 5.0L	
	EFI, 1986/91 Crn - Victoria,	
	Grn - Marquis 5.0L EFI,	
	1986-92 Mark VII 5.0L HO,	
	1982-92 Mustang 5.0L HO.	
912507M	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1985-92 Bronco, E Series E Series 5 01 EEI	
912507N	E-Series, F-Series 5.0L EFI. Idle Air By-Pass Valve	0.7 Hr.
01200710	Cleaning - 1988-90 Bronco,	0.7 111.
	F-Series 5.8L. 1991 Econo,	
	F-Series, Bronco 5.8L (Do	
	not Clean Solenoid, Calib;	10
	1-64E-R10, 1-64H-R10, 1-64J-R	
	1-64K-R10, 1-64M-R10, 1-64P- 1-64R-R10, 1-75A-R00, 1-76A-	
	1-76B-R00, 1-76C-R00.	K00,
9125070	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1991/92 F And	
	B Series, 7.0L EFI.	
912507P	Idle Air By-Pass Valve	0.7 Hr.
	Cleaning - 1987-92	
	E-Series, F-Series 7.5L EFI.	
912507Q	Throttle Body And Idle Air	0.9 Hr.
	By-Pass Valve Cleaning -	
	1989/90 Probe 3.0L EFI.	
912507R	Throttle Body And Idle Air	0.8 Hr.
	By-Pass Valve Cleaning -	
	1987-90 Econoline (With Rear Heat) 4 91 FEI	
912507S	Rear Heat) 4.9L EFI. Throttle Body And Idle Air	0.9 Hr.
,12010	By-Pass Valve Cleaning -	0.7 111.
	1988-90 Econoline 5.8L	
	EFI.	
912507T	Service Kit Install - All Cars	1.0 Hr.
	And Light Trucks (Except	
	Aerostar And Econoline) - Refer To The Service	
	Procedure Application	
	roccure reprication	

Charts, For Vehicle Application.

912507U Service Kit Install - 1.2 Hr. Aerostar, Econoline -Refer To Service Procedure Application Charts - For Vehicle Application. DEALER CODING BASIC PART NO. 9E926 49 OASIS CODES: 602300, 607000, 607400, 607700, 608400, 611500, 618400