

FUEL SYSTEM

SERVICE INSTRUCTION WORKSHEET

TO REPAIR

GF3825-10

HOLLEY CARBURETOR

4BBL.

MODELS 4180C, 4180EG, 4190EG

1. Carefully read the text in the following pages to become familiar with the contents of this worksheet before performing carburetor overhaul.
2. The exploded view shown is typical of the model carburetor this kit will service. The view may differ slightly from the actual carburetor being overhauled.
3. Use the exploded view as a guide. The numerical sequence may generally be followed to disassemble the carburetor far enough to permit cleaning and inspection.
4. Parts list shown DOES NOT reflect the contents of this kit.
5. Kit may contain extra parts intended for other carburetors within this group. Substitute identical replacement parts for original worn parts found in carburetor.

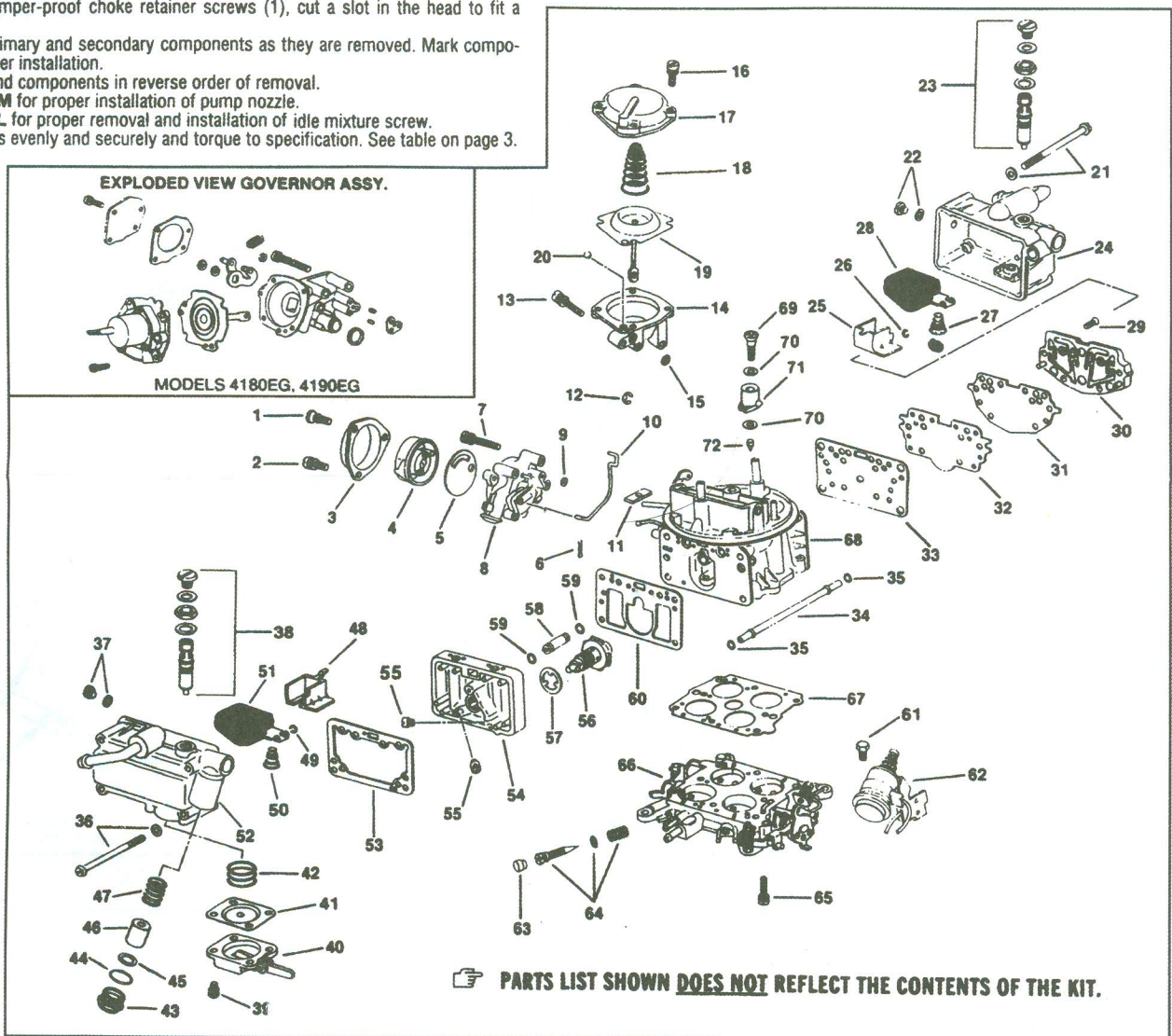
REMOVAL & INSTALLATION NOTES

1. Cover opening on intake manifold after carburetor is removed.
2. To remove tamper-proof choke retainer screws (1), cut a slot in the head to fit a screwdriver.
3. Do not mix primary and secondary components as they are removed. Mark components for proper installation.
4. Install parts and components in reverse order of removal.
5. Refer to Fig. M for proper installation of pump nozzle.
6. Refer to Fig. L for proper removal and installation of idle mixture screw.
7. Tighten screws evenly and securely and torque to specification. See table on page 3.

CLEANING

Cleaning must be done with carburetor disassembled. Use spray cleaner and a stiff bristle brush to remove dirt and carbon deposits. Do not use abrasives and wires to clean parts and passageways. Wash off in suitable solvent, and clear all passageways with compressed air.

Caution: When cleaning with solvent do not soak or spray parts containing rubber, leather, plastic and electrical components.



PARTS LIST SHOWN DOES NOT REFLECT THE CONTENTS OF THE KIT.

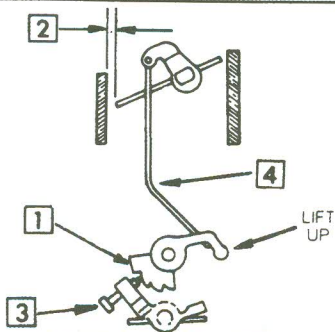
- | | | | | |
|------------------------------------|------------------------------------|------------------------------------|---|----------------------------------|
| 1. Screw, retainer (2) | 17. Cover, sec. diaphragm | 33. Gasket, sec. fuel bowl | 49. E clip, primary float | 65. Screw, throttle body (6) |
| 2. Screw, retainer | 18. Spring, sec. diaphragm | 34. Tube, fuel line | 50. Spring, primary float | 66. Throttle body assembly |
| 3. Retainer, choke cover | 19. Sec. diaphragm assy. | 35. O-ring, tube (2) | 51. Primary float assembly | 67. Gasket, throttle body |
| 4. Thermostatic coil & cover assy. | 20. Check ball, sec. diaphragm | 36. Screw & washer, pri. fuel bowl | 52. Fuel bowl assy, primary | 68. Main body assembly |
| 5. Gasket, choke cover | 21. Screw & washer, sec. fuel bowl | 37. Plug & washer, fuel level | 53. Gasket, pri. fuel bowl | 69. Screw, pump nozzle |
| 6. Clip, choke rod | 22. Plug & washer, fuel level | 38. Needle & seat assy., pri. | 54. Metering body, primary | 70. Washer, pump nozzle (2) |
| 7. Screw, choke housing (3) | 23. Needle & seat assy., sec. | 39. Screw, pump cover (4) | 55. Main jet (2) | 71. Nozzle, pump discharge |
| 8. Choke housing assembly | 24. Fuel bowl assy., sec. | 40. Cover assembly | 56. Economizer valve | 72. Check needle, pump discharge |
| 9. Washer, choke housing | 25. Baffle, sec. fuel | 41. Pump diaphragm assy. | 57. Washer, economizer | |
| 10. Rod, choke | 26. E clip, sec. float | 42. Spring, diaphragm return | 58. Tube, pump passage | |
| 11. Seal, choke rod | 27. Spring, sec. float | 43. Fitting, fuel inlet | 59. O-ring, tube (2) | |
| 12. E clip, sec. diaphragm link | 28. Sec. float assembly | 44. Washer, fitting | 60. Gasket, pri. metering body | |
| 13. Screw, sec. diaphragm housing | 29. Screw, sec. metering body (6) | 45. Washer, filter | 61. Screw, idle solenoid (2) | |
| 14. Sec. diaphragm housing assy. | 30. Metering body, sec. | 46. Filter, fuel | 62. Idle solenoid assembly | |
| 15. Washer, sec. diaphragm housing | 31. Gasket, metering body | 47. Spring, filter | 63. Plug, primary idle mixture needle | |
| 16. Screw, cover (4) | 32. Plate, metering body | 48. Baffle, primary fuel | 64. Needle, o-ring & spring, idle mixture | |

ADJUSTMENT DATA (CONT'D)

**FIG. H
FAST IDLE CAM
ADJUSTMENT**

NOTE: CLOSE CHOKE VALVE COVER BY ROTATING CHOKE VALVE 45° RICH. TIGHTEN SCREWS.

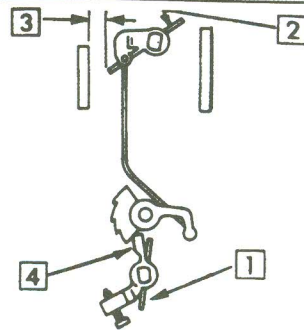
1. POSITION FAST IDLE SCREW ON TOP STEP OF CAM BY RELEASING THROTTLE VALVES.
2. PLACE SPECIFIED GAUGE OR DRILL BETWEEN LOWER EDGE OF CHOKE VALVE & WALL OF AIR HORN. OPEN & CLOSE THROTTLE TO PERMIT FAST IDLE CAM TO DROP.
3. LIFT UP ON FAST IDLE CAM. THERE SHOULD BE LITTLE OR NO MOVEMENT AS THE FAST IDLE SCREW IS ON THE SECOND STOP OF THE FAST IDLE CAM.



4. IF ADJUSTMENT IS REQUIRED, BEND CHOKE ROD HERE TO SET FAST IDLE SCREW IN CORRECT LOCATION.

**FIG. I
CHOKE UNLOADER
ADJUSTMENT**

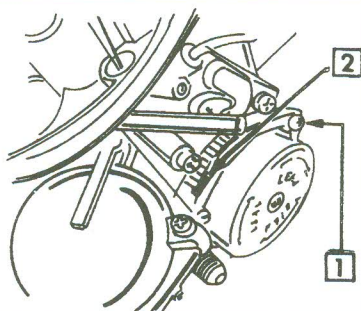
1. MOVE THROTTLE VALVES TO A WIDE OPEN POSITION & HOLD.
2. MEANWHILE, MAINTAIN A LIGHT CLOSING PRESSURE ON CHOKE VALVE.
3. MEASURE AS SPECIFIED BETWEEN WALL OF AIR HORN & LOWER EDGE OF CHOKE VALVE.
4. IF ADJUSTMENT IS REQUIRED, BEND PAWL ON FAST IDLE LEVER.



**FIG. J
AUTO CHOKE ADJ.
(HOT AIR ONLY)**

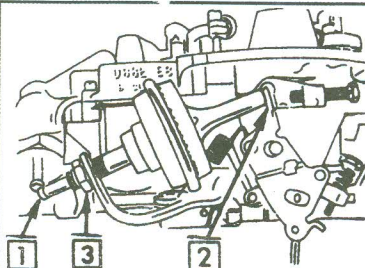
NOTE: FOR HOT AIR WITH ELEC. ASSIST SEE SERVICE MANUAL.

1. LOOSEN CHOKE COVER HOLD-DOWN SCREWS.
2. ROTATE CHOKE COVER TO ALIGN INDEX MARK ON CHOKE COVER WITH SPECIFIED LINE GRADUATION ON CHOKE HOUSING. RE-TIGHTEN HOLD-DOWN SCREWS.



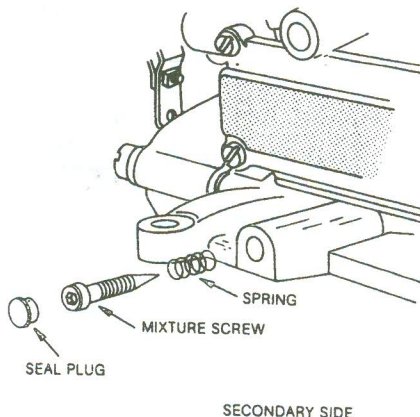
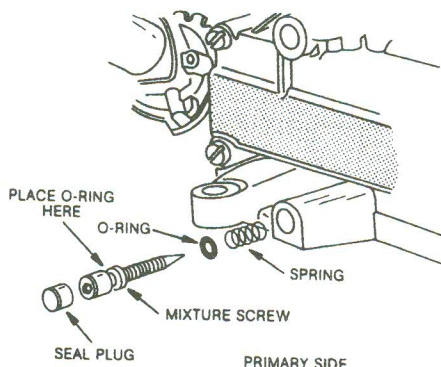
**FIG. K
DECEL THROTTLE
MODULATOR ADJ.**

1. 1980 MODELS: HOOK UP TACH & RUN ENGINE AT OPERATING TEMPERATURE. APPLY AN OUTSIDE VACUUM SOURCE OR HOOK UP A JUMPER HOSE CONNECTION WITH VACUUM GAUGE ATTACHED TO AN INTAKE MANIFOLD VACUUM OUTLET. APPLY 19 INCHES OF VACUUM.
2. TACH SHOULD READ 1800 R.P.M. WITH MODULATOR AGAINST THROTTLE STOP.



3. IF ADJUSTMENT IS NEEDED, LOOSEN LOCKNUT & TURN MODULATOR IN OR OUT TO ACHIEVE REQUIRED R.P.M.. UPON COMPLETION, RE-TIGHTEN LOCKNUT.

**FIG. L
REMOVAL & INSTALLATION — IDLE MIXTURE SCREWS**

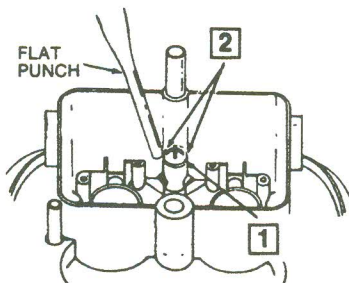


1. DRILL HOLE IN SEAL PLUG TO FIT SCREW-END OF SMALL SLIDE HAMMER, DRIVE OUT PLUG.
2. BEFORE REMOVING IDLE ADJUSTING SCREWS, TURN IN UNTIL SLIGHTLY SEATED COUNTING NUMBER OF TURNS. RECORD FOR PROPER INSTALLATION.
3. INSTALL NEW O RING WHERE APPLICABLE AND TURN SCREWS IN UNTIL SLIGHTLY SEATED THEN BACK OUT NUMBER OF TURNS RECORDED EARLIER.
4. REFER TO ENGINE DECAL AND CAR SERVICE MANUAL FOR PROPER IDLE ADJUSTING PROCEDURE AND SPEC. REPLACE PLUGS AFTER COMPLETING ADJUSTMENTS.

**FIG. M
PUMP NOZZLE
INSTALLATION**

1. TIGHTEN SCREW SECURELY OVER NOZZLE.
2. USING A FLAT PUNCH AND HAMMER, RESTAKE NOZZLE SCREW IN TWO PLACES.

NOTE: EXERCISE CARE WHEN STAKING. DO NOT USE EXCESSIVE FORCE.



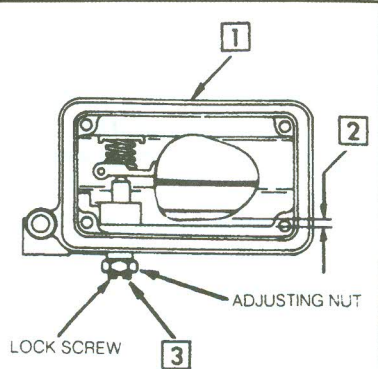
TORQUE TABLE

APPLICATION	IN.-LB.
Economize	100
Throttle body screws	50
Fuel bowl screws (Pri. & Sec.)	50

ADJUSTMENT DATA

**FIG. A
FLOAT LEVEL
ADJUSTMENT (DRY)
PRIMARY & SECONDARY**

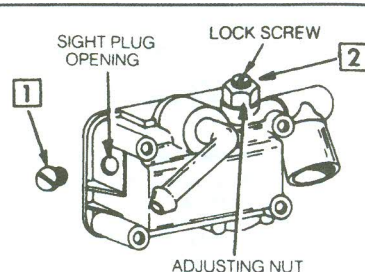
- 1 INVERT FUEL BOWL.
- 2 FLOAT SURFACE MUST BE PARALLEL WITH SURFACE DIRECTLY BELOW FLOAT AS SHOWN.
- 3 IF ADJUSTMENT IS REQUIRED, LOOSEN LOCK SCREW & TURN ADJUSTING NUT UNTIL FLOAT SURFACE IS PARALLEL WITH SURFACE BELOW FLOAT. RE-TIGHTEN LOCK SCREW. NOTE: DO NOT COMPRESS NEEDLE TIP AS A FALSE READING MAY RESULT.



**FIG. B
FLOAT LEVEL
ADJUSTMENT (WET)
PRIMARY & SECONDARY**

NOTE: WITH VEHICLE ON A LEVEL SURFACE & ENGINE RUNNING AT OPERATING TEMPERATURE, PLACE AN EMPTY CONTAINER BELOW SIGHT PLUG TO DRAIN OFF ANY SPILLOVER OF FUEL. WARNING: EXERCISE CARE DUE TO FIRE HAZARD.

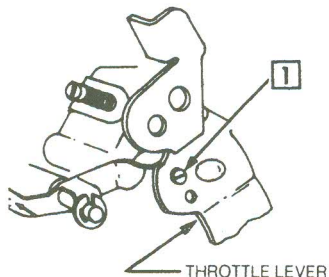
1. REMOVE SIGHT PLUG FROM FUEL BOWL. FUEL LEVEL MUST BE AT BOTTOM EDGE OF SIGHT PLUG OPENING $\pm 1/32"$ TOLERANCE.



2. IF ADJUSTMENT IS REQUIRED, LOOSEN LOCK SCREW & TURN ADJUSTING NUT CLOCKWISE OR COUNTER CLOCKWISE TO LOWER OR RAISE FUEL LEVEL RESPECTIVELY. ALWAYS MAKE THE FINAL ADJUSTMENT IN THE "RAISE FUEL LEVEL" MODE.

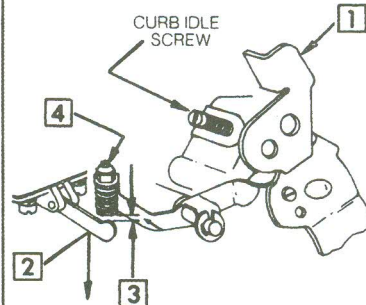
**FIG. C
PUMP HOLE
LOCATION**

1. ALIGN SCREW HOLE IN PLASTIC CAM WITH SPECIFIED HOLE (SEE SPEC. CHART) IN THROTTLE LEVER. INSERT & TIGHTEN RETAINING SCREW.



**FIG. D
PUMP LEVER
ADJUSTMENT**

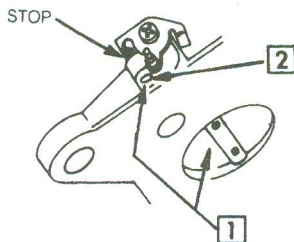
1. MAINTAIN THROTTLE IN WIDE OPEN POSITION.
2. DEPRESS PUMP OPERATING LEVER IN A DOWNWARD POSITION TO FULLY COMPRESS DIAPHRAGM.
3. MEASURE CLEARANCE AS SPECIFIED BETWEEN PUMP LEVER & BOLT HEAD AS SHOWN.
4. IF ADJUSTMENT IS REQUIRED, HOLD BOLT HEAD FAST & TURN SELF-LOCKING NUT UP OR DOWN AS REQUIRED.



**FIG. E
SEC. THROTTLE
STOP ADJUSTMENT**

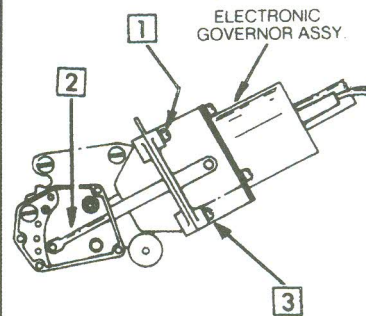
1. CLOSE SECONDARY THROTTLE PLATES BY BACKING OUT SECONDARY THROTTLE STOP SCREW.
2. NEXT, TURN SCREW IN UNTIL IT JUST TOUCHES STOP. AFTER WHICH TURN SCREW ANOTHER EXTRA 1/2 TURN.

NOTE: 1986-83 LIGHT DUTY TRUCKS -351, 460 ENG. TURN SCREW 1/4 TURN.



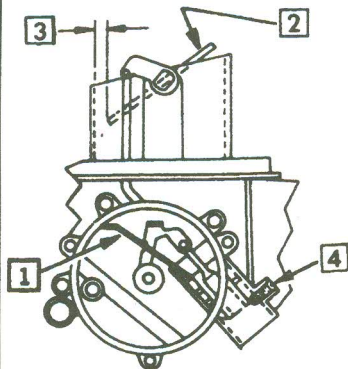
**FIG. F
GOVERNOR DIAPHRAGM
INSTALLATION & ADJ.**

1. CAREFULLY ALIGN GOVERNOR HOUSING SCREW HOLES WITH DIAPHRAGM ASSY. & COVER. INSTALL SCREWS FINGER TIGHT. NOTE: SCREWS MUST BE PROPERLY ALIGNED TO AVOID DAMAGE TO DIAPHRAGM.
2. PULL DIAPHRAGM PLUNGER ROD OUT (TOWARD LEFT) TO THE END OF ITS TRAVEL.
3. WHILE DIAPHRAGM IS STRETCHED IN THIS POSITION, TIGHTEN DOWN SCREWS EVENLY.



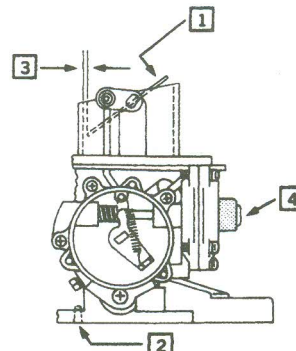
**FIG. G
CHOKE PULL-DOWN
ADJUSTMENT**

1. WITH CHOKE COVER REMOVED, INSERT A .026" WIRE OR PAPER CLIP INTO PISTON BORE TO MOVE PISTON DOWN AGAINST STOP SCREW.
2. APPLY LIGHT CLOSING PRESSURE ON CHOKE VALVE.
3. MEASURE CLEARANCE AS SPECIFIED BETWEEN LOWER EDGE OF CHOKE VALVE & WALL OF AIR HORN.
4. IF ADJUSTMENT IS REQUIRED, REMOVE PUTTY FROM STOP SCREW & TURN SCREW IN TO DECREASE OR TURN OUT TO INCREASE CLEARANCE.



**FIG. G-1
CHOKE PULL-DOWN
ADJUSTMENT**

1. MOVE THROTTLE VALVE WIDE OPEN ALLOWING CHOKE TO FULLY CLOSE, LOCATING FAST IDLE SCREW ON HIGH STEP OF CAM.
2. APPLY AN OUTSIDE VACUUM SOURCE TO COMPLETELY SEAT DIAPHRAGM.
3. MAINTAIN CHOKE VALVE IN A CLOSED POSITION WHILE MEASURING DISTANCE AS SPECIFIED (SEE SPEC. CHART) BETWEEN LOWER EDGE OF CHOKE VALVE & WALL OF AIR HORN.
4. IF ADJUSTMENT IS REQUIRED, REMOVE SEAL PLUG FROM SCREW & TURN ADJUSTING SCREW IN OR OUT AS NEEDED.



CARBURETOR SPECIFICATION CHART

Year	Carb. No.	Float Level Adjustment (Dry) Fig. A	Float Level Adjustment (Wet) Fig. B	Pump Hole Location Fig. C	Pump Lever Adjustment Fig. D	Sec. Throttle Stop Adjustment Fig. E	Choke Pull-Down Adjustment Fig. G or G-1	Fast Idle Cam Adjustment Fig. H	Choke Unloader Adjustment Fig. I	Auto Choke Adjustment (Hot Air Only) Fig. I
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FORD TRUCKS

1989-79	D9TE-ACC-AYA-AYB	2	3	No. 2	.015	5	.210	—	—	—
	D9TE-AGA-BKA	2	3	No. 1	.015	5	.210	.210	.315	5N.R.
	D9TE-AHC-AHD-AHE-AZA	2	3	No. 1	.015	5	.210	—	—	—
	D9TE-EBA-ETA-EUA	2	3	No. 1	.015	5	.210	—	—	—
	E1UE-RA	2	3	No. 1	.015	5	.210	.210	.315	5N.R.
	E2TE-VA-AHA-AJA-AKA-CMA-CNA	2	3	No. 1	.015	5	.210	—	—	—
	E2TE-CPA-CRA-CSA-CTA-CUA-CVA	2	3	No. 1	.015	5	.210	—	—	—
	E3TE-PC-PD-RC-SB-SC-TB-TC	2	3	No. 1	.015	5	.220	.220 ¹	.315	3N.R.
	E3TE-RD	2	3	No. 1	.015	5	.200	.220 ¹	.315	3N.R.
	E3ZE-AUA-AUB-BGA-BGB	2	3	No. 1	.015	5	.205	—	.300	3N.R.
	E4TE-ARA	2	3	No. 1	.015	5	.185	—	.300	3N.R.
	E4ZE-SA	2	3	No. 1	.015	5	.205	—	.300	1N.L.
	E4ZE-YA	2	3	No. 1	.015	5	.199	—	.300	2N.L.
	ESHE-CA-DA-KA	2	3	No. 1	.015	5	.210	—	—	2N.L.
	ESHE-DA-DB-DC-EA-EB-EC	2	—	4	.015	7	.170	—	.300	—
	ESHE-DD-ED	2	—	No. 2	.015	7	.170	—	.300	—
	ESHE-FA	2	3	No. 1	.015	5	.150	—	.300	T.R.
	ESHE-LA-LB-LC-MA-MB	2	—	4	.015	7	.170	—	.300	—
	ESHE-MC	2	—	4	.015	7	.170	—	.300	—
	ESHE-UA-VA-WA-XA-YA-ZA	2	3	No. 1	.015	5	—	—	—	—
	ESTE-ZA-ABA	2	3	4	.015	5	.185 ⁶	—	—	—
	ESTE-ZB	2	3	No. 1	.015	5	.157	—	.425	T.R.
	ESZE-GA	2	3	No. 1	.015	5	.178	—	.300	2N.L.
	ESZE-SA	2	3	No. 1	.015	5	.205	—	.300	1N.L.
	E6HE-AC	2	3	No. 1	.015	5	.140	—	.425	T.R.
	E6HE-GA	2	3	No. 1	.015	5	.150	—	.300	T.R.
	EOTE-JA-MA-RA-SA	2	3	No. 1	.015	5	.210	—	.300	T.R.

FOOTNOTES:

- ¹ 1983 models only.
- ² See text, Fig. A.
- ³ See text, Fig. B.
- ⁴ Install in original location.
- ⁵ See text, Fig. E.
- ⁶ Set Carb. No. ESTE-ZA, .157.
- ⁷ See text, Fig. E. Use 1/4 turn.

ABBREVIATIONS:

- Exc. Except
 N.L. Notch Lean
 N.R. Notch Rich
 T.R. Tamper Resistant