

P1-1004

**PENNTEx IDLE CONTROLLER
FORD 351/460 GAS F-SERIES
(TRUCK CHASSIS)**

INSTALLATION:

P1-1004

***** **DISCONNECT THE GROUND CABLE FROM ALL BATTERIES.** *****

1. Mount idle controller (inside vehicle) in a location that is both easily accessible to driver and within wiring harnesses reach. (Harness extensions for controller are available)
2. Using a 9/32" socket remove knee panel from driver's side of dash.
3. Connect the red wire from idler to a red with yellow stripe wire (18 AWG) in small harness (figure 1-A). This wire should be 12 volts when the ignition switch is in run position. (factory fuse #17, [10 amp.] warning buzzers, gauges, tach., elect. trans.)
4. Connect the orange wire from the idler to a red with light blue stripe wire (18 AWG) in ignition switch harness (figure 1-B). This wire will pull to ground through the park/neutral switch and the starter relay when the gear shift is in park or neutral.
5. Connect the green wire from the idler to a light green wire (18 AWG) in ignition switch harness (figure 1-B). This wire will be 12 volts when the brake pedal is pressed.
6. Connect the black ground wire to the metal steering column support bracket with 1/2" tech. screw.
7. Carefully drill a 1/2" diameter hole through the firewall and feed harness through to grommet.
8. Tape and tie any loose wire or harnesses away from sharp edges and moving parts.
9. Reinstall knee panel.
10. Route harness (away from steering components) along upper firewall to passenger side of engine compartment.
11. Connect the blue wire to relay terminal #85.
12. Connect the gray wire to relay terminal #86.
13. Using supplied 1/2" tech. screws mount relay and circuit breaker to fender next to starter relay (figure 2-A). Make certain that they don't interfere with hood spring assembly.
14. Connect circuit breaker to starter relay's battery terminal.
15. Check to insure that the solenoid's idle adjuster nut and cable housing are fully retracted.
16. Mount solenoid on the fender skirt by fan motor as shown in figure 3.
17. Ground the negative terminal of solenoid to the battery ground bolt on the fender (figure 2-B).
18. Connect the 10 AWG red wire from the positive solenoid terminal to relay terminal # 87.
19. Secure all loose wires and harnesses away from moving parts sharp objects and heat sources that could cause damage.
20. Remove throttle cover.

21. Remove factory throttle linkage(s) from ball pivot and remove cable assemblies from throttle bracket.
22. Remove throttle bracket from engine.
23. Drill a 3/8" (0.375) diameter hole in the throttle bracket as shown by the figure listed for each engine:
351 (5.8L) - Fig. 5
460 (7.5L) - Fig. 8
24. Mount idler throttle cable to bracket. Re-attach bracket to engine and secure cable housing away from moving components, sharp objects and heat sources that could cause damage.
25. Re-attach OEM throttle cable(s) to bracket only.
26. Attach idler throttle cable to the throttle body using linkage adapter. Throttle cable should loop through linkage adapter with the loop on the back or opposite side of the throttle lever. **DO NOT SANDWICH THE CABLE BETWEEN THE LINKAGE ADAPTER AND THE THROTTLE LEVER.** SEE FIGURES LISTED BELOW:
351 (5.8L) - Fig. 4,6 & 7
460 (7.5L) - Fig. 9
27. Leave approximately 1/2" of slack in cable and tighten screws on pivot adapter.
28. Re-attach factory throttle cables to throttle lever.
29. Operate throttle lever manually to insure obstruction free swivel of pivot adapter without hanging or jamming.
30. Reinstall throttle cover.
31. Reconnect all battery ground cables.

TESTING AND ADJUSTMENT

1. Turn ignition switch to run position, but **DO NOT START ENGINE**. The "low" battery indicator (red) should be lit. After 10 seconds the "HIGH IDLE" indicator (yellow) should light up.
2. Press the brake pedal. The "HIGH IDLE" indicator (yellow) should turn off. Release the brake and it should come back on with no delay.
3. Put the emergency brake on, press the brake pedal and move the gear shift to "Drive". Release the brake pedal. The "HIGH IDLE" indicator (yellow) should not be lit. Put the shifter in "neutral". The "HIGH IDLE" indicator should light. Put the shifter in "park".
4. Start engine and press the "manual engage" button. Allow engine to warm up. Turn on all possible engine and electrical loads. Using solenoid's adjustment nut adjust engine RPM to a level adequate to maintain battery voltage above 12.75 volts (1000 to 1500 RPM). Tighten solenoid's locking nut after final adjustment. Alternator may take a few minutes to recharge batteries before voltage can rise. Alternator must also be capable of putting out more current than vehicle draws at a given RPM.
5. Press brake to insure idle speed returns to normal.
6. Installation complete.

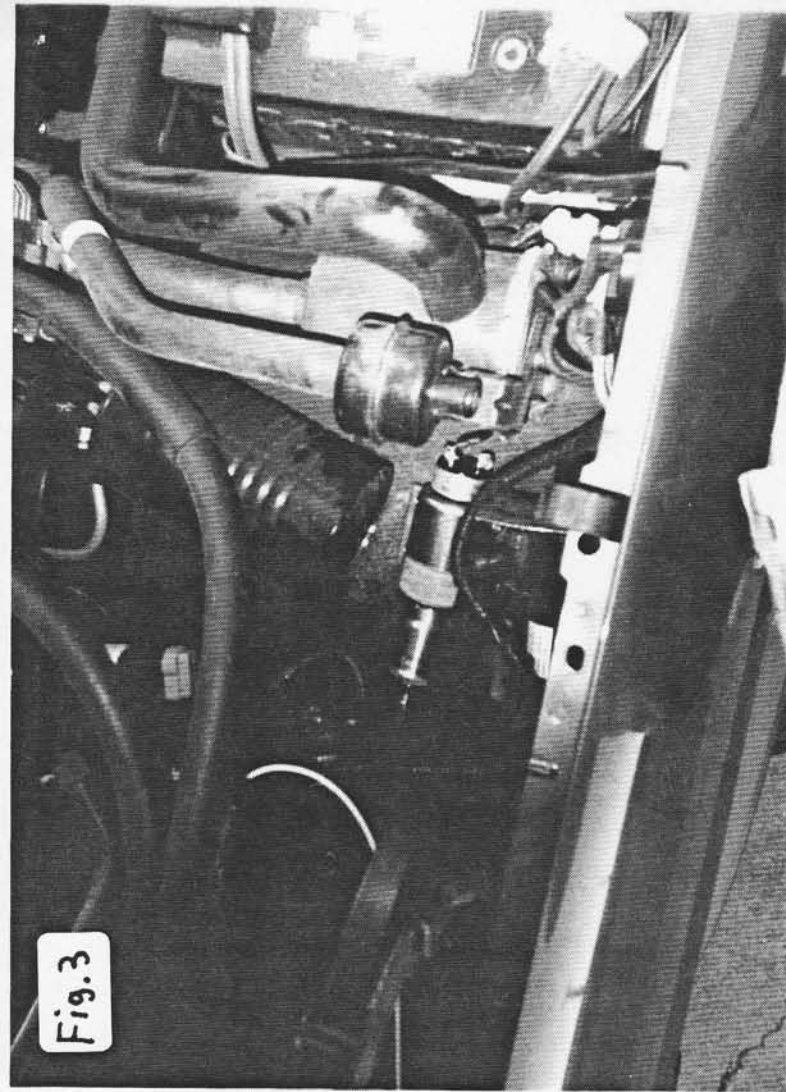


Fig. 3

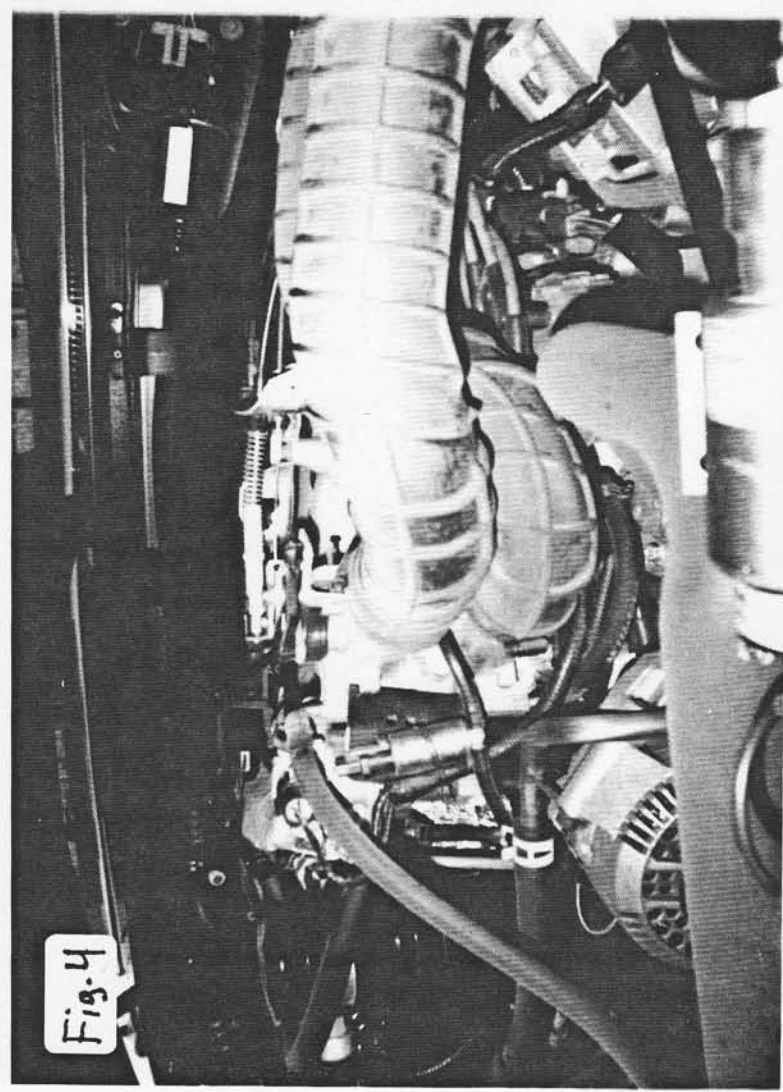


Fig. 4



Fig. 1

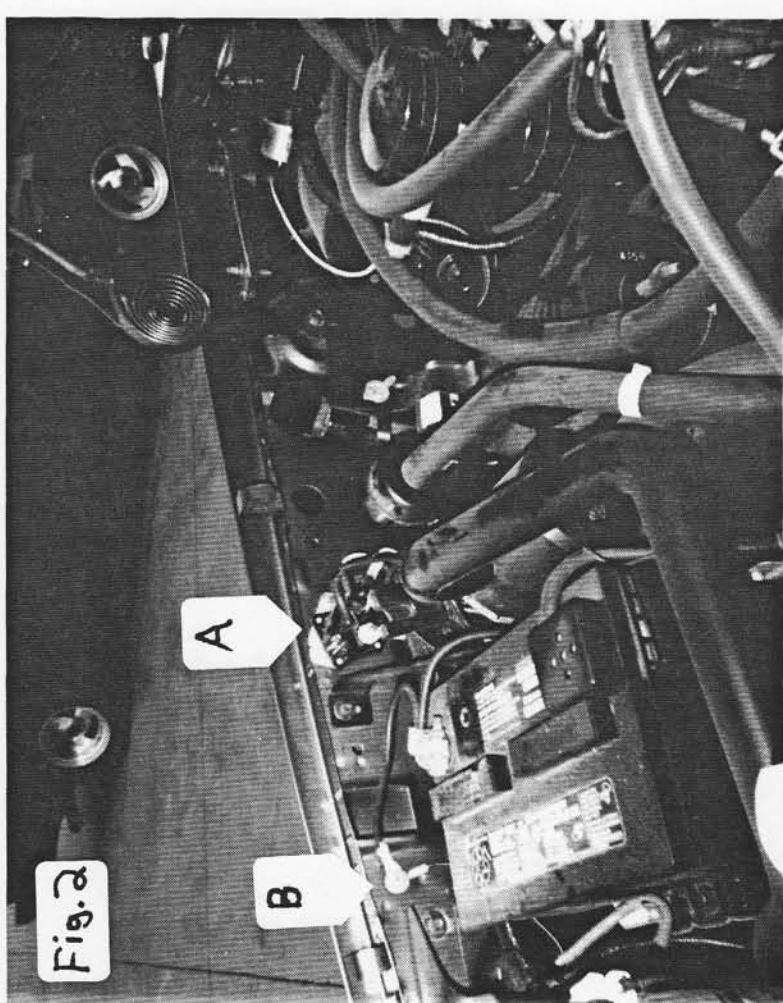


Fig. 2

351 (5.8L)
'95 F-series

Fig. 5

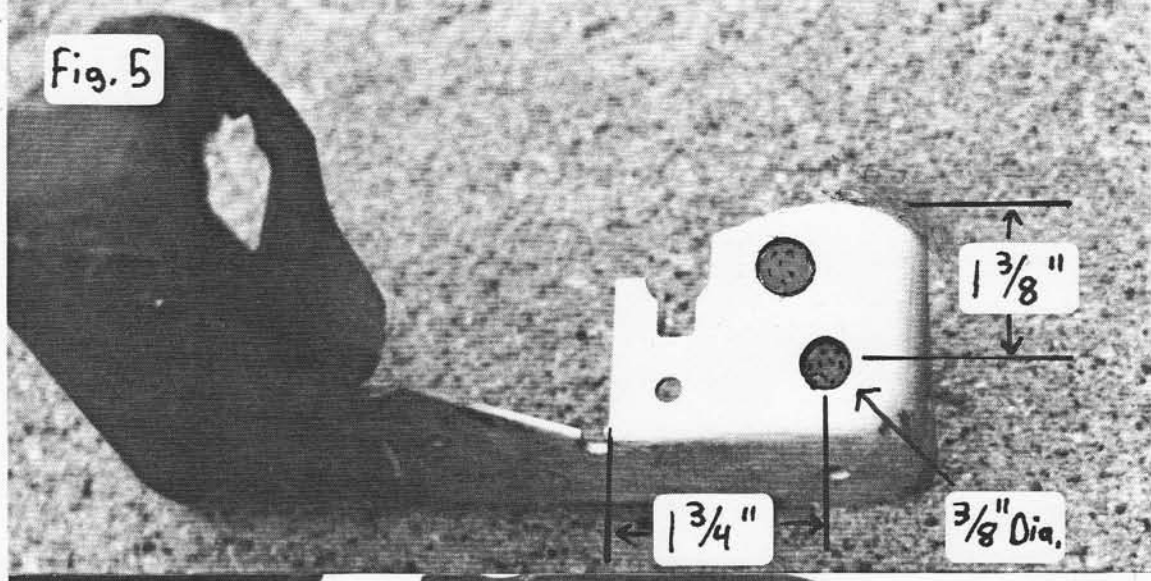
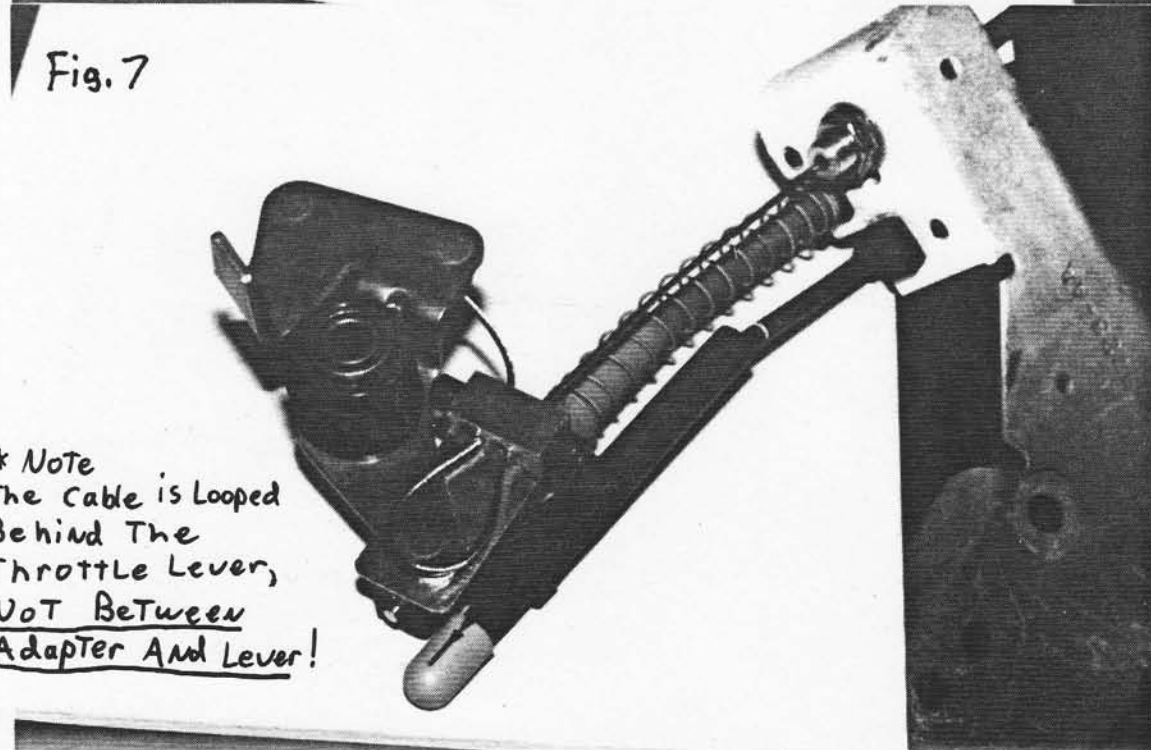


Fig. 6



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for Illustration
only! →

Fig. 7



* Note
The cable is Looped
Behind The
Throttle Lever,
NOT BETWEEN
Adapter And Lever!

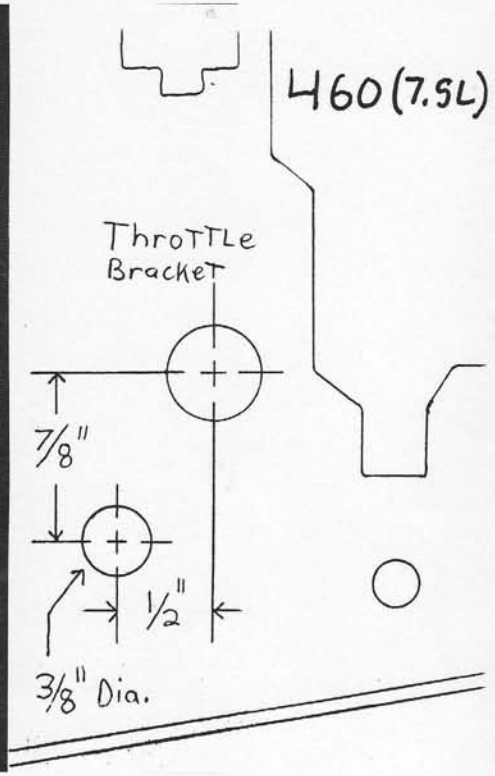
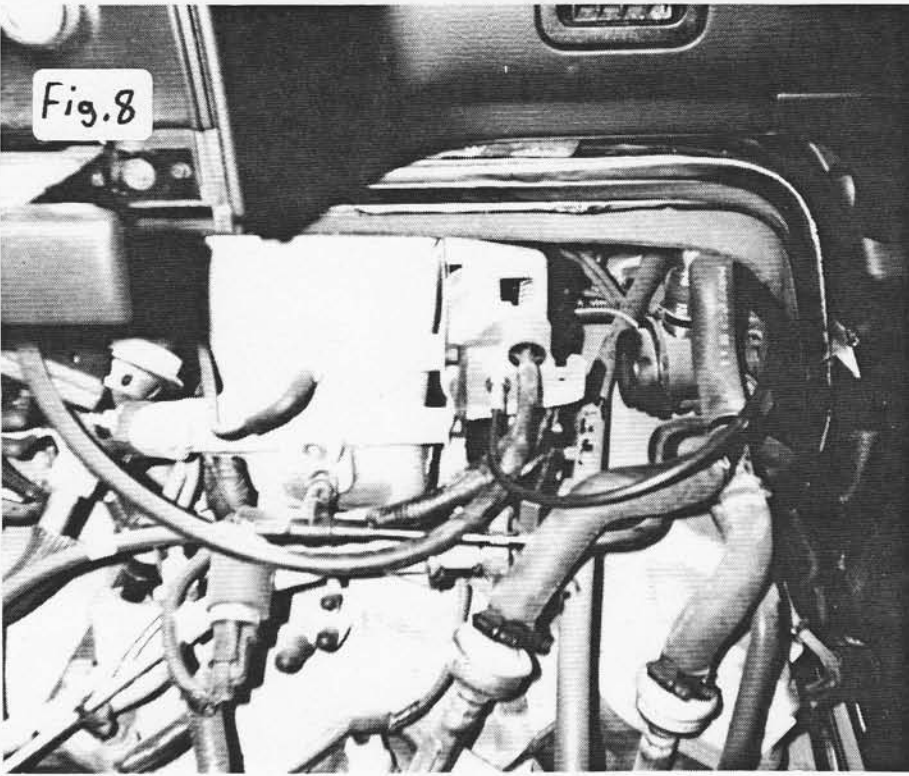
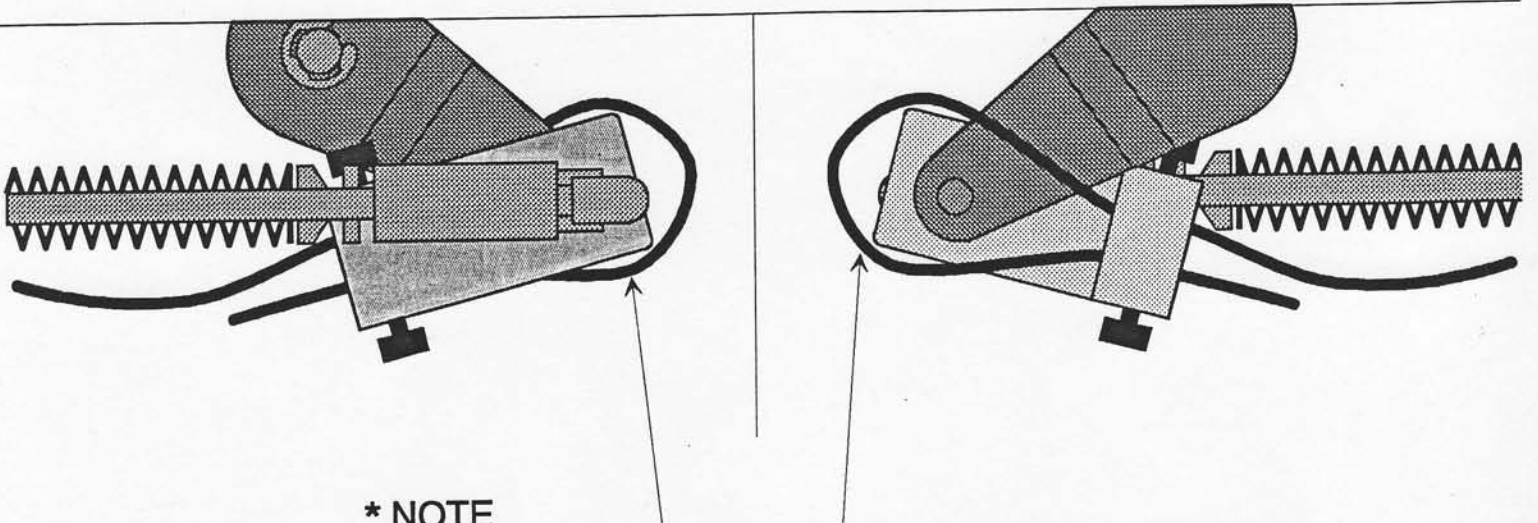


FIG. 9

FORD 460 E350



* NOTE
 THE CABLE IS LOOPED BEHIND THE THROTTLE
 LEVER, NOT BETWEEN LINKAGE ADAPTER AND
THROTTLE LEVER!