

B AND BL SYSTEMS

AN INVITATION

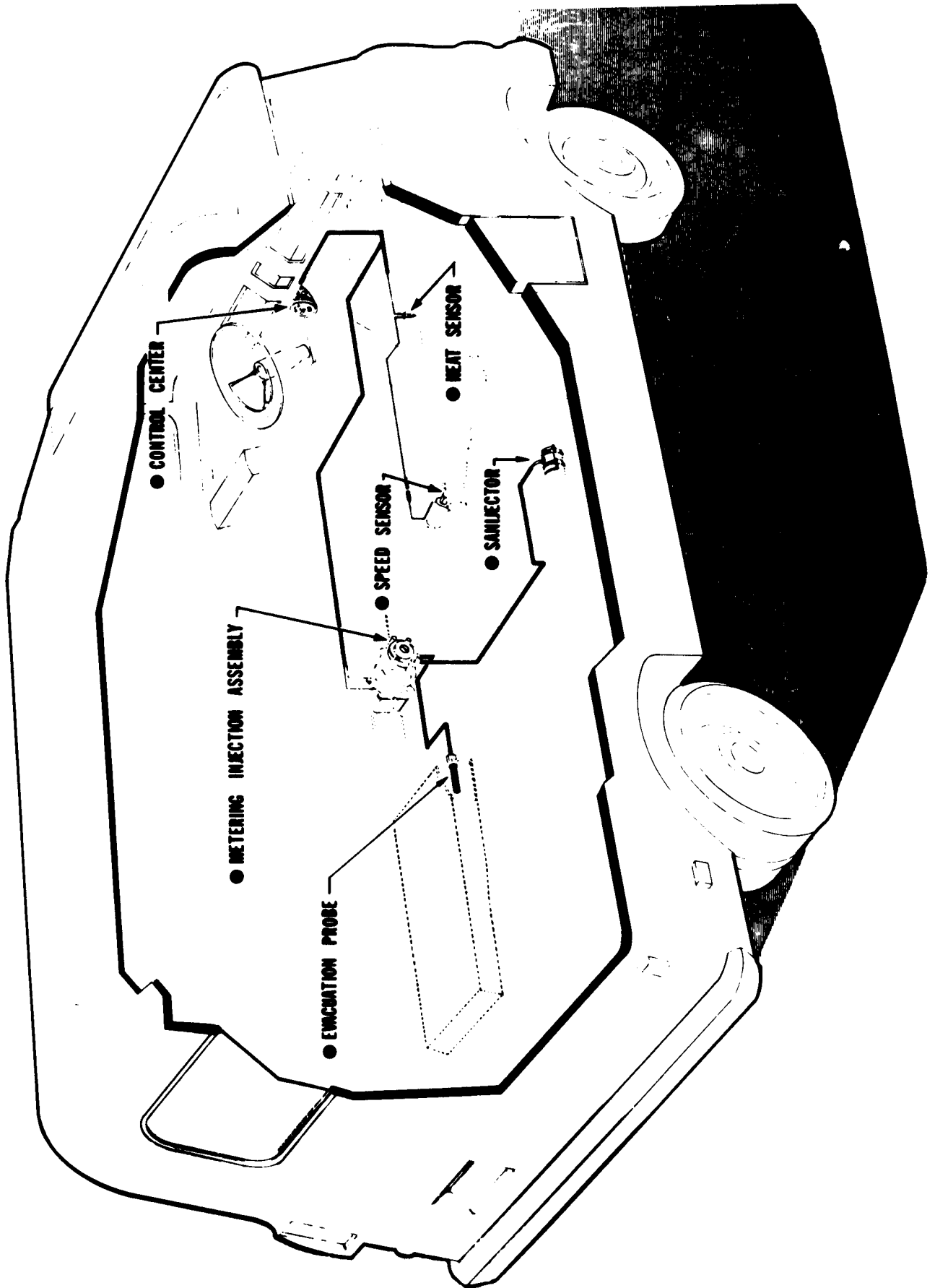
If you are like most of us you have probably discarded these instructions, have all the parts on the floor and are now wondering to yourself, "When will these engineers ever learn to make it simple."

Thermasan has designed this booklet with the intention of making the installation less complicated and more efficient for you. The sequence and suggestions are the result of hundreds of installation experiences by our personnel.

We invite you to take advantage of the time and money savings possible through the careful use of these instructions.

After reading and using these instructions, please forward your comments, ideas, suggestions and complaints regarding the booklet's usefulness and we will include your name on the mailing list of our regular THERMASAN SERVICE SAVERS.

R. S. V. P.



Models B and BL replace the original motorhome Thermasan Model A. These two new systems convert recreational vehicles into mobile, pollution-free waste destruction plants. Either system can be installed on motorhomes, chassis mounts, truck campers, minihomes, and van conversions. The Thermasan Travel Trailer System will be available in the fall of 1971.

TWO THERMASAN SYSTEMS

Model B features stylized, dash-mounted controls to operate the new, improved second generation Thermasan System.

Model BL in addition to providing the ultimate in recreational vehicle travel convenience has two new, useful and unique features:

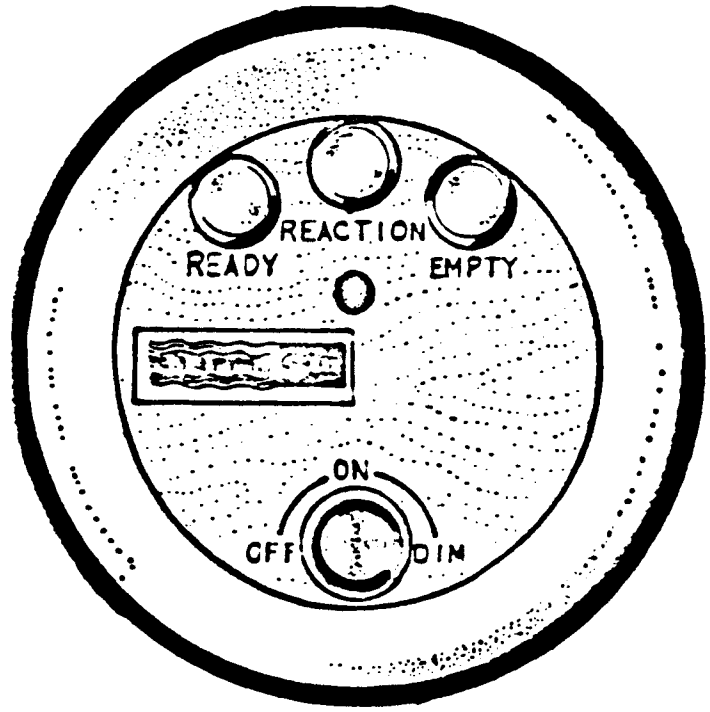
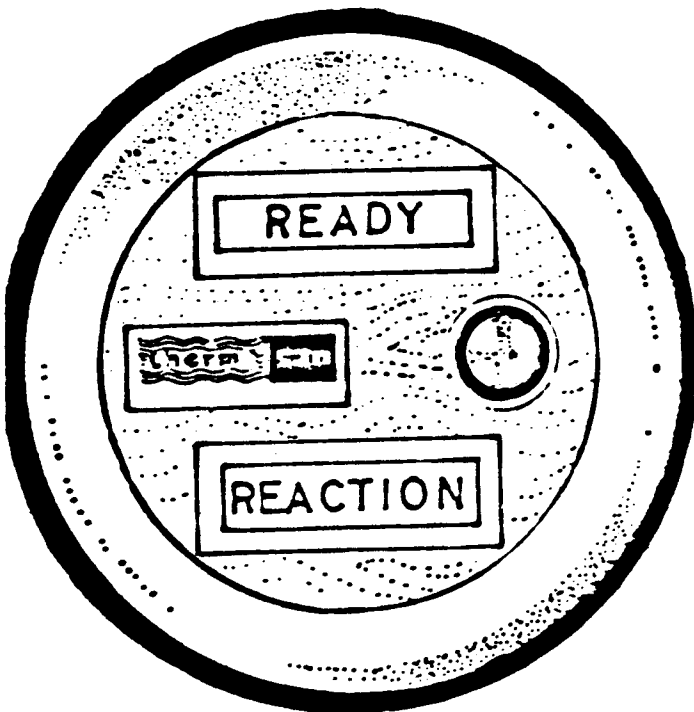
- . A truly fail-proof holding tank sensor that tells you when to turn off your Thermasan System.
- . Press-to-test benefit that provides you with a remote control check for engine exhaust incineration. When the control is pressed, the READY and REACTION lights will flash when the metering pump is injecting wastes.

THREE THERMASAN TYPES

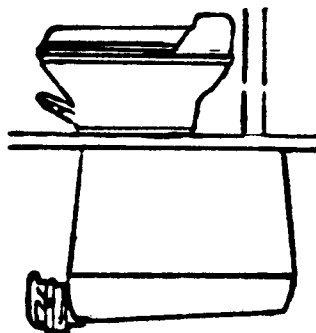
Thermasan is designed to accommodate the three existing RV sanitation systems. When you order your Thermasan, please specify type:

- Type 200 . . In this system, only toilet wastes are collected in the holding tank. Sink, shower and basin wash water bypass the holding tank.
- Type 600 . . Sink, shower and basin wash water and toilet wastes all collect in a single holding tank.
- Type 2-500 . Your vehicle has two holding tanks. One for toilet wastes and the other waste water. Order this type when you want your Thermasan to draw wastes from both tanks at the same time.

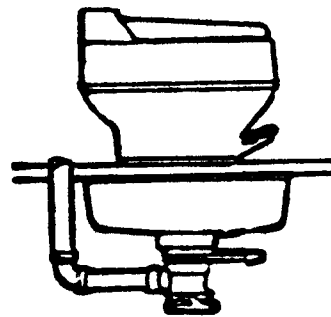
CONTROL CENTER MODULE



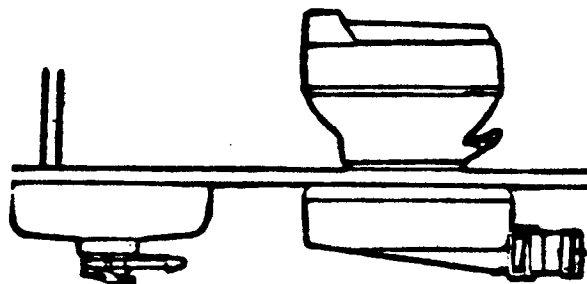
200 SYSTEM



600 SYSTEM



2-500 SYSTEM



INSTALLATION INSTRUCTIONS FOR MODELS B-200 AND B-600 THERMASAN WASTE DESTRUCTION SYSTEM

This carton contains the following pieces:

1. Control Center Module
2. Metering Injection Assembly
3. Sanijector Assembly
4. Heat Sensor Assembly
5. Speed Sensor
6. Holding Tank Access Probe
7. Waste Hoses
8. Wiring Harness
9. Hardware Package
10. Information Packet
11. Level Indicator (BL System Only)

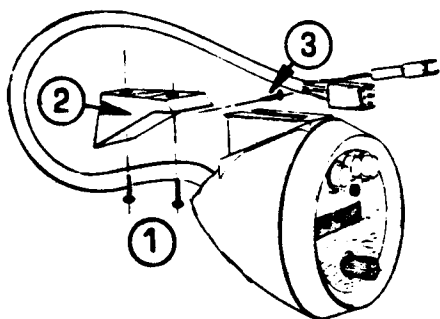
CAUTION: Do not use Models B and BL Systems, Type 600, with holding tanks which collect toilet waste only and bypass the wash water. The concentrated toilet waste in this type of holding tank will not burn rapidly enough to neutralize the odors.

Type 600, B and BL Systems, is for use only with holding tanks which collect both toilet waste and wash water. Type 200, B and BL Systems, is for use with holding tanks which collect toilet waste only.

Tools required for installation:

1. 1/4 drill motor
2. 1/8, 9/64, 7/16, 1/2 drill
3. Screwdriver set
4. Pliers
5. Knife
6. 1-1/8 wrench or large crescent wrench
7. 3/4 diameter hole saw and arbor

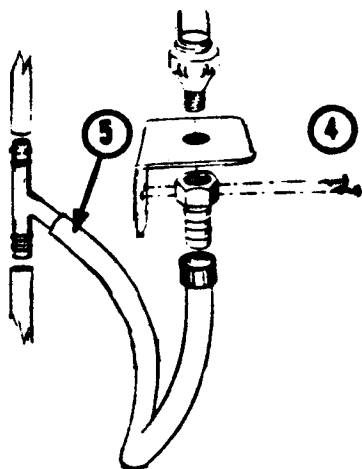
I. MOUNT CONTROL CENTER MODULE TO DASH OF VEHICLE



1. Drill 1/8 dia. holes in dash. Mount base to dash with 2 #6 screws, 1/2" long.
2. Panel slides onto base after mount is connected to the dash - snap into place.
3. Drive #6 x 1/2" black screw into side of base.

NOTE: Position where display is visible to vehicle operator but where it will not obstruct movement or vision.

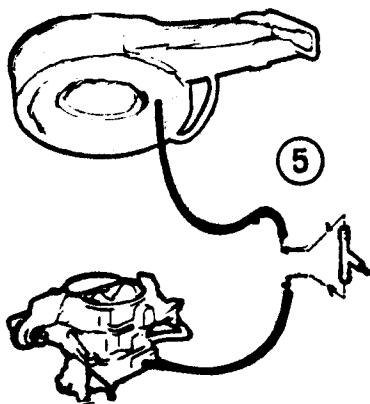
II. MOUNT HEAT SENSOR TO VEHICLE FIREWALL



NOTE: Mounting area must be clear of moving parts and hood closing.

4. Drill 9/64" holes. Mount bracket with 2 #8 screws, 3/4" long.
5. Cut into crankcase ventilation hose and install the "T" fitting provided with the hose or the larger one in the hardware package. No clamps are required.

CAUTION: Any shortening of the hose to the heat sensor must be made at the "T" end of the line. An in-line restrictor is at the other end.

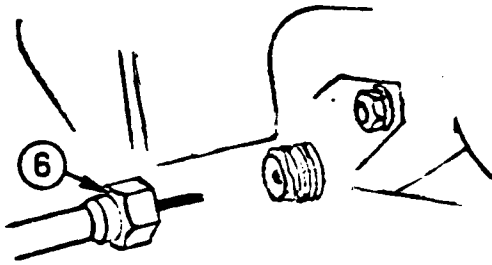


If a crankcase ventilation hose is not available these steps must be followed:

- A. Locate a vacuum line directly connected to the intake manifold.
- B. Remove the line from its' fitting and with the engine at idle test for a strong constant vacuum.
- C. If this is found suitable, install as per the instructions above.

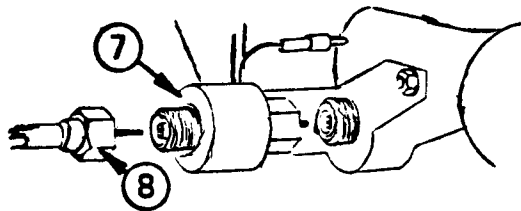
DO NOT INSTALL IN VACUUM BRAKE LINE.

III. MOUNT SPEED SENSOR TO TRANSMISSION



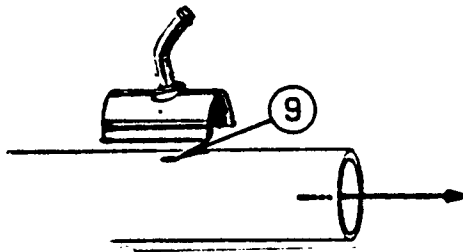
You may find variation in transmissions. A separate set of instructions is attached to help select appropriate adapter.

6. Remove speedo cable at transmission.
7. Assemble speed sensor to transmission. Finger tight plus 1/4 turn. Do not overtighten.
8. Assemble speedo cable to speed sensor. Finger tight plus 1/4 turn. Do not overtighten.



NOTE: Connection may be made to speed control device if transmission drive is difficult to locate.

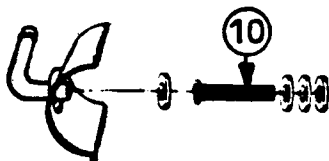
IV. INSTALL SANIJECTOR



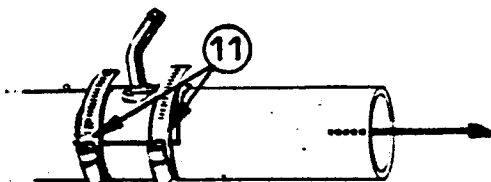
9. Drill 1/2 dia. hole in exhaust pipe. Install as close to engine as possible ahead of muffler, but behind any catalytic pollution control devices.

10. Set screen end of sanijector into hole.

CAUTION: Hose must be at least 2 inches from hot exhaust system. Allow clearance from other obstructions.

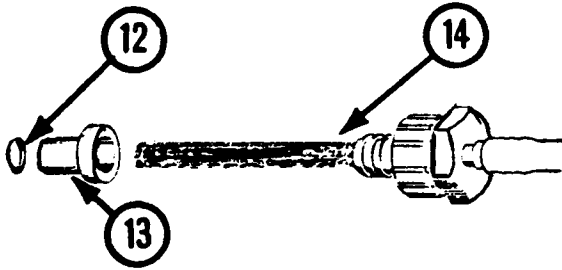


11. Install clamps and tighten in place. Gasket will compress to make a seal.



V. INSTALLATION OF TANK EVACUATION PROBE

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12. Using hole saw cut a 3/4" hole in tank for grommet.

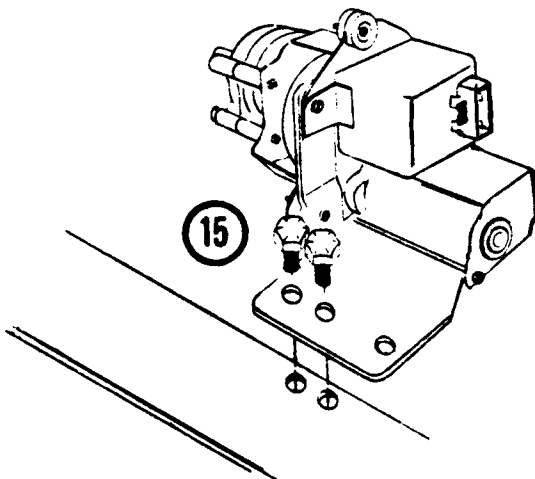
13. Insert grommet into hole.

14. Insert tank access probe into grommet.

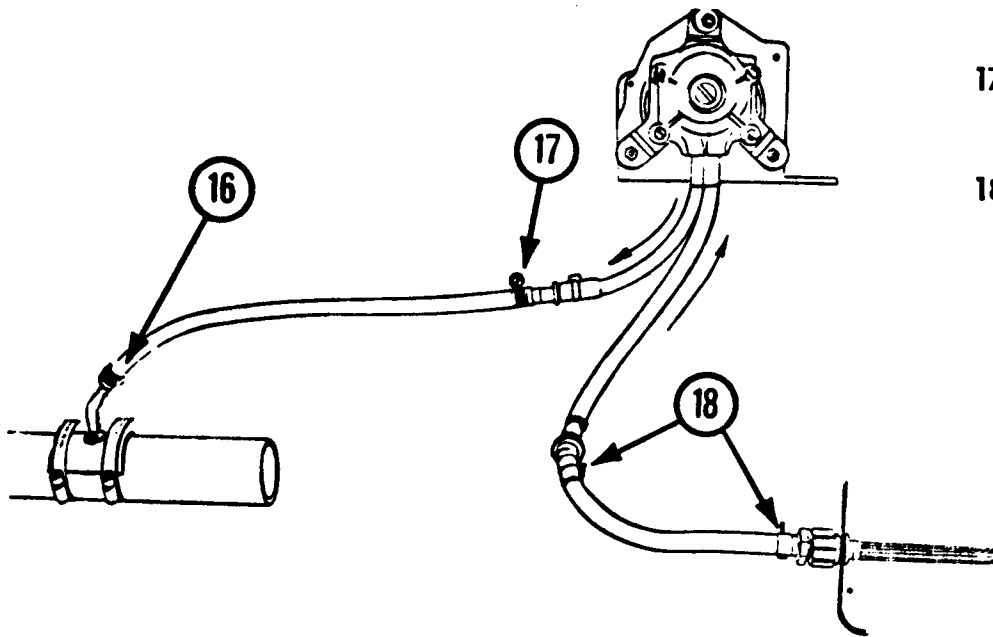
NOTE: If difficulty is encountered, soap may be used as a lubricant to aid installation.

VI. INSTALLATION OF METERING INJECTION ASSEMBLY

15. Drill two 7/16" holes through frame and mount metering injection assembly with 3/8 x 1" bolts.



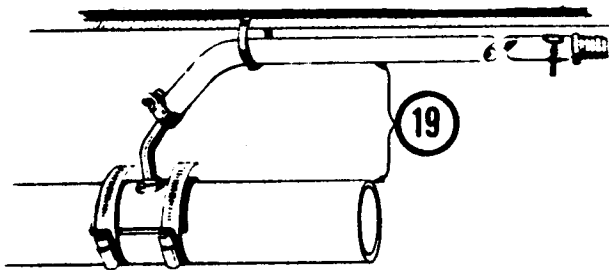
VII. INSTALLATION OF HOSES



16. Connect colored silicone rubber hose to sanijector.
17. Cut to length and connect to pump outlet.
18. Cut to length and connect grey plastic hose between pump inlet and tank evacuation probe.

NOTE: Grey waste lines are for connections between holding tank and pump. Milky waste line is for connecting sanijector and pump.

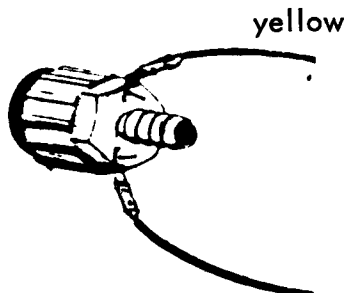
CAUTION: The Milky hose can withstand extreme temperature. No hose can be substituted.



19. Using the tie wraps string the wiring harness and hoses to the bottom of the vehicle, making certain to clear all hot areas and abrasive surfaces.

VIII. INSTALLATION OF LEVEL INDICATOR MODULE

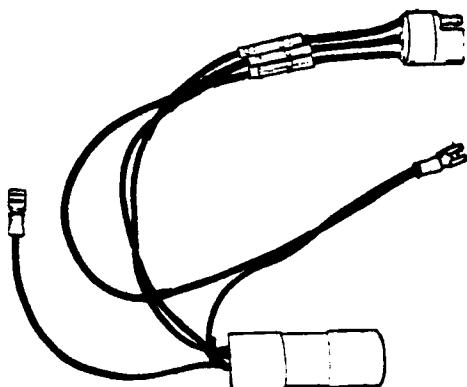
CAUTION: Turn off all power before installing level indicator.



- 20. Install evacuation probe in the manner described by V of the Installation Instructions. The two screws in the probe must be at a 45 degree angle with yellow lead on top.

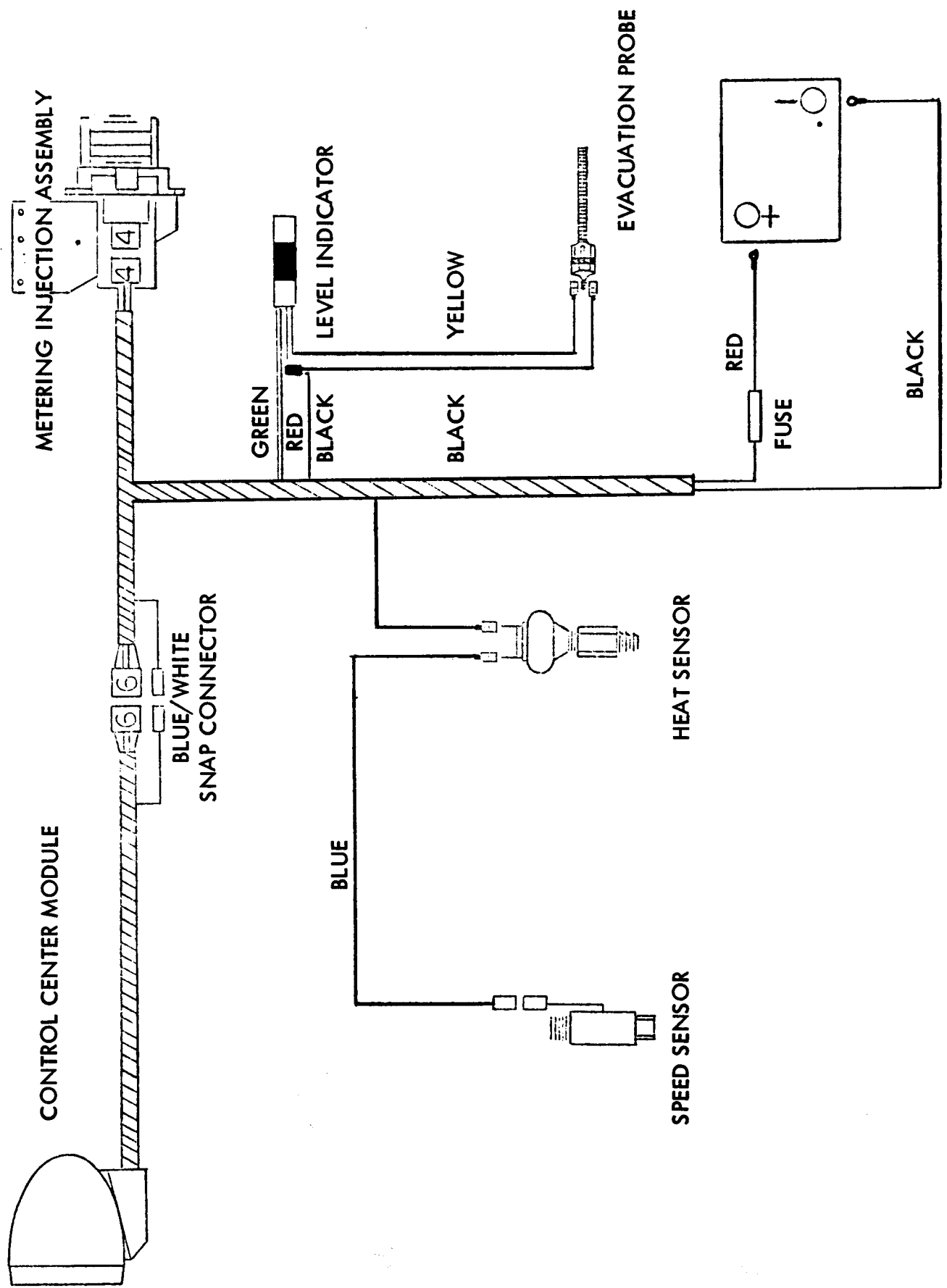
CAUTION: When installing the clamp to the hose on the evacuation probe care must be taken not to touch the screws or terminals.

- 21. Plug the black and yellow leads into either of the two terminals on the evacuation probe.
- 22. The plug can then be inserted into its' counterpart in the harness. Firmly affix the module to the evacuation probe hose using either black electrical tape or tie wraps. Do not pinch hose.



IX. INSTALLATION OF WIRING HARNESS

- A. Assemble as per the following diagram.
- B. Do not tie in place until hoses are installed, because you may wish to route them together and save the work of double fastening.



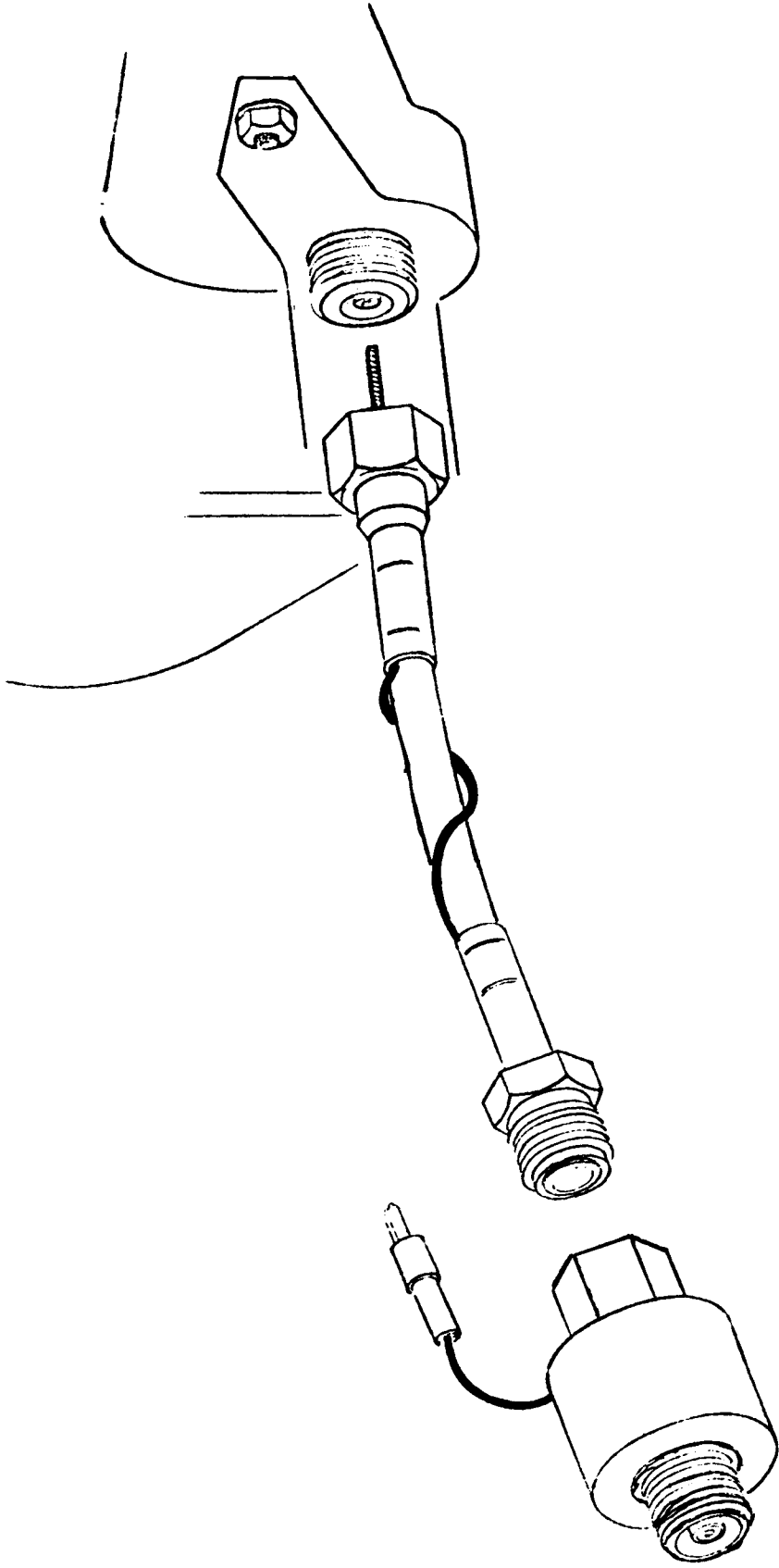
INSTALLATION INSTRUCTIONS FOR SPEEDOMETER CABLE ADAPTATIONS TO SPEED SWITCH

I. Standard Clearance Extension Kit Part Number 10009

- A. Used for adapting speed switch to transmission where the speed switch will not screw directly on the drive hub at the transmission. This adaptor is flexible and permits the speed switch to be placed in a variety of positions.

- B. Generally the Standard Clearance Extension will fit the following kinds of vehicles.
 - 1. Chevrolet (including trucks)
 - 2. Buick
 - 3. Oldsmobile
 - 4. Pontiac
 - 5. Cadillac
 - 6. GMC Trucks
 - 7. Chrysler
 - 8. Dodge (including trucks)
 - 9. Plymouth
 - 10. International
 - 11. Chrysler industrial engines

- C. To install simply unscrew the speedo cable nut from the transmission hub and connect the Standard Clearance Extension as per the sketch below.
 - 1. Take care not to leave bends in the adaptors or the speedo cable that have a radius less than 4 inches.
 - 2. Do not overtighten the coupling nuts on the speedo cable. Slightly more than finger tight is ample.



II. F and L Speed Switch Adaptor Kit

A. These parts must be used to adapt the speed switch to vehicles and chassis manufactured by the Ford Motor Company. The F adaptor is for all Ford products except Lincoln cars. The Lincoln car uses the L adaptor. These parts look very much alike and differ only in the length of the speedo transmission plug, which couples into the transmission hub.

B. To install remove the speedo cable from the transmission and assemble the parts as per the sketch below.

1. Take care not to leave bends in the adaptors or the speedo cable that have a radius less than 4 inches.
2. Do not overtighten the coupling nuts on the speedo cable. Slightly more than finger tight is ample.

