Heated Throttle Cable Installation Instructions

Max IV

TCABLEIV.DOC

Requirements:

Max IV with a functional 12 Volt charging system and 4 cycle engine.

Tools Required:

Drill Motor
1/4" Drill Bit
25/32" Drill Bit
3/16" Drill Bit
"POP" Rivet Gun
Ruler
Wire Crimpers
Wire Strippers
Wire Cutters
5/16 Nut Driver or Phillips Screwdriver
Standard Screwdriver
1/2" Socket
Ratchet
1/2" Wrench
7/16" Wrench
Felt Tip Pen
Tachometer (recommended)

Procedure:

1. Read through all instructions and identify all necessary parts.

2. Remove the front and rear floor boards and the engine cover as described in your owner's manual.

3. Disconnect the negative (ground) cable from the battery with a 7/16" wrench.

4. At the engine end of the throttle cable, locate the cable mounting bracket and the cable adjusting screw on the engine throttle linkage. Mark the location of the cable and the cable housing such that the new cable can be placed in the same position. This will minimize any engine adjustment after the new cable is installed.

5. Loosen the mounting bracket with a 5/16" nut driver and loosen the cable adjusting screw with a standard screwdriver. The cable should now be free from the engine throttle linkage.

6. At the throttle lever end of the cable (the front of the vehicle), pull up the lever so it is in the full throttle position. Locate the retaining clip securing the cable housing to the lever. Remove this clip with a standard screwdriver.

7. With the throttle lever in the idle (down) position, unlock the cable end from the throttle lever. This can be done by prying the "T" shaped end

towards the steering lever. The cable end should "pop" out of the throttle lever and allow you to feed the end out of the base of the throttle lever. The cable should now be free on both ends.

8. Cut any wire ties holding the throttle cable to the chassis of the vehicle. Observe the routing pattern of the throttle cable as the new cable will follow the same path.

9. Install the heated throttle cable into the vehicle. This is most easily done going from the front of the vehicle to the rear. Route the cable in the same manner as the cable you removed other than the steering lever location. The heated cable must run above the steering lever shaft instead of under the shaft or between the shaft and the lower body.

10. With the throttle cable installed you can now hook up each end. Starting with the throttle lever end of the cable, feed the "T" end of the cable through the throttle lever. Snap the "T" end into the plastic lever with a screw driver. Using the new retaining clip provided in the kit, lock the cable housing to the base of the throttle lever (in the same location as the old cable before it was removed).

11. Using the mark on the engine end of the old throttle cable, hook up the new cable so that it is in the same position. Make sure the mounting bracket and cable adjusting screw is tight.

12. Wire tie the cable to the chassis and steering lever at the same locations as the old throttle cable. DO NOT TIGHTEN DOWN THE WIRE TIES ALL THE WAY. THIS WILL COLLAPSE THE LOOM AND PINCH THE HEATING ELEMENT WHICH MAY CAUSE A SHORT CIRCUIT, OVERHEATING OF THE CABLE, OR A POSSIBLE FIRE HAZARD. THIS WILL ALSO VOID ANY WARRANTY OF THE CABLE SYSTEM. The wire ties should be just tight enough to hold the cable in place.

13. Refer to Figure I at the end of these instruction. Mark the location for the cable switch on the dashboard as shown (3 3/4" to the right and level with the center of the choke lever). Using a 1/4" drill bit, drill a pilot hole at this location. Now drill the hole out using a 25/32" drill bit.

14. Mount the red rocker switch in this hole such that the gold terminal is on the top. Tighten the switch down to the dashboard.

15. Refer to Figure II at the end of these instructions. Mark the location for the throttle cable fuse (2" forward and level with the current fuse mount). Drill a hole at this location using a 3/16" drill bit. Remove the fuse cap from the fuse holder supplied in the kit. Using the 3/16" rivet and backup washer provided, mount the new fuse holder to the vehicle body (the same way as the current fuse holder is mounted). If you have a vehicle with an in-line fuse (serial number prior to 12791), you will not have a fuse mounted in the area shown in figure II. However, you must mount your cable fuse in location shown.

16. If your vehicle has a serial number of 14293 or higher, you may skip step 17 and you may discard the 137" red wire, the white terminal housing, one male brass spade, and one insulated spade. If your vehicle has a serial number before 14293, please follow step 17.

17. Feed the 137" red wire into the wire harness loom from the rear of the vehicle. Push the wire through the entire harness until it is out of the loom at the dashboard (you may have to run the wire next to the loom if there is a problem running it in the loom). At the dashboard end of the red wire, crimp on an insulated spade terminal. At the engine end of this wire, crimp on a male spade and lock it into the female (white) housing. See Figure IV.

18. Strip both ends of the 6" black wire supplied in the kit. Crimp the 1/4" ring terminal on one end and crimp a brass male spade on the other end. Lock the male spade into the white terminal housing supplied in the kit. See Figure IV. Locate the 1/4" ground bolt on the base of the engine stand. There should be one black wire and terminal on this bolt. Remove the nut and place the 1/4" ring terminal on the black 6" wire on this bolt and re-tighten the nut.

19. Locate the black terminal housing at the end of the wires coming out of the throttle cable loom. This will be near the engine end of the throttle cable. Connect this to the white female housing used in steps 17 and 18. Connect this to the black housing described above. Make sure the wire colors match up correctly.

20. Locate the fuse assembly supplied in the kit. Please follow step 20a if your vehicle does not have an hour meter. Follow step 20b if your vehicle has an hour meter. If you vehicle has a serial number before 11998 follow step 20c.

20a. Cut the wires on the fuse as shown in Figure IV. The 9" length of wire will get a brass female spade while the 13" wire will get an insulated spade terminal. Unplug the terminal housing from the back of the ignition switch. This housing should look like a triangle. At the bottom middle of the housing there will either be an open terminal or a yellow wire. If you have a Briggs and Stratton engine, there should be an open terminal slot in this housing. Lock the brass spade on the fuse lead into this slot. If you have a Kohler engine, there should be a yellow wire in the bottom middle terminal slot. Remove the terminal from the housing and cut this terminal off. Using a new brass female spade, crimp the 9" fuse lead and the yellow wire in the new spade. Lock the brass spade back into the terminal housing. Reconnect the housing onto the ignition switch base.

20b. Cut the wires on the fuse as shown in Figure IV. The 17" length wire will get a brass female spade while the 13" wire will get an insulated spade terminal. Locate the wire going to the positive (+) side of the hour meter. There should be a red or yellow wire running to it. Remove this wire from the hour meter and cut off the brass female spade on the end of it. Place the 17" fuse wire and this wire in a new brass female spade, crimp both wires into the spade and insert it back onto the hour meter base.

20c. Cut the wires on the fuse as shown in Figure IV. Using a quick splice terminal, connect the 9" fuse wire to the white ammeter wire. Place the splice near the ignition switch base. This way you will have the correct lengths to place the fuse in the proper

location. Crimp on an insulated spade terminal to the 13" fuse wire.

21. Connect the insulated terminal on the 13" fuse wire to the bottom terminal on the throttle cable switch (see Figure III). Locate the insulated terminal on the red wire from step 17. If you have a vehicle with serial number 14293 or higher, this terminal may be hidden under the dash. Connect this insulated terminal to the center terminal on the throttle cable switch.

22. Locate the 7" black wire supplied in the kit. Crimp an insulated spade on one end of this wire. Follow step 22a for a vehicle with a serial number prior to 11998. Follow step 22b for a vehicle with a serial number after 11998 and without an hour meter. Follow step 22c for a vehicle with a serial number after 11998 and with an hour meter.

22a. Using a quick splice terminal, splice the other end of the 7" black wire to the black wire running from the switch and to the headlight harness. Make the splice as close to the switch base as possible.

22b. Locate the black wire connected directly to the base of the ignition switch (this will be separate from the terminal housing on the switch base). Unplug this wire and cut off the brass female spade. Connect the other end of the 7" black wire supplied in the kit to the end of this wire and crimp them both together in a new brass female spade. Plug this terminal back into the ignition switch base.

22c. Locate the black wire connected to the base of the hour meter. Unplug this wire and cut off the brass female spade. Connect the other end of the 7" black wire supplied in the kit to the end of this wire and crimp them both in a new brass female spade. Plug this terminal back into the hour meter.

23. Plug the insulated terminal on the end of the 7" black wire into the top terminal on the throttle cable switch (see figure III).

24. Lace the wires installed under the dashboard and at the rear of the vehicle and secure with wire ties. DO NOT TIGHTEN ANY WIRE TIES PLACED ON THE THROTTLE CABLE LOOM. ANY WIRE TIES IN THIS AREA MUST BE JUST SNUG AND MUST NOT COLLAPSE THE LOOM AT ALL. COLLAPSING THE LOOM MAY PINCH THE HEATING ELEMENT WHICH MAY CAUSE A SHORT CIRCUIT, OVERHEATING OF THE CABLE, OR A POSSIBLE FIRE HAZARD.

25. Make sure the 2 Amp fuse is installed in the fuse holder and lock the holder into the fuse base mounted to the vehicle body.

26. Check all the wire connections and then connect the negative battery cable to the battery.

27. It is recommended that the engine rpm is checked since the throttle cable has been removed. The idle speed should be 1400-1500 rpm and full throttle speed should be 4000 rpm. Make sure the vehicle is in reverse gear before checking the engine speed. If the engine needs adjustment, please contact your local dealer.

28. Reinstall the floor boards and the engine cover as described in you owner's manual.

Heated Throttle Cable - Use and Maintenance

Directions for use:

The red toggle switch mounted on the dashboard controls the heating element for the throttle cable. The "up" position is power on and the "down" position is power off. The switch will light up when the power is on. On vehicles with a serial number prior to 11998, the cable heating element will always be on if the cable switch is on. Even when the ignition switch is in the off position. On vehicles with a serial number higher than 11998, the cable heating element may only be turned on when the ignition switch is in the Lights/Run or Run position. The cable heating element will automatically turn off if the ignition switch is turned to the OFF position.

Before starting the vehicle in cold weather, check the throttle lever for free movement. DO NOT force the lever if it will not move! Before starting the engine, turn the key switch to the run position. Turn on the throttle cable heating element with the rocker switch. Leave the cable on for about 10 minutes and check the throttle lever for free movement. If the lever now moves easily, start the engine as described in your owner's manual. If the throttle lever will still not move easily, leave the throttle cable heating element on and check for any obstructions causing the cable to stick. A frozen cable should thaw in about 5 to 10 minutes. If you find an obstruction or if the cable will not thaw, please consult your dealer.

You may use your vehicle with the throttle cable heating element on at all times without any loss of charge in the battery system or damage to the cable system.

DO NOT LEAVE THE VEHICLE UNATTENDED WITH THE THROTTLE CABLE HEATING ELEMENT ON!!!

Maintenance:

Check the cable loom and wire terminals at regularly scheduled maintenance intervals (every 10 hours) for wear. A hole in the loom may cause the heating element to short out resulting in a blown fuse, broken heating element, and/or a possible fire hazard.

If the fuse should blow, you may replace it with a 2 amp ATC automotive style fuse. Before replacing the fuse, check the heating element and wire system for any indication of why the fuse blew. If the system is O.K., replace the fuse. The fuse holder towards the front of the vehicle is for the throttle cable heating system.

The throttle cable heating system will only work properly if the throttle cable itself is lubed regularly with a throttle cable lubrication device. The lubrication will help displace moisture allowing the heating element to work efficiently. Failure to lube the cable will result in abnormal throttle cable wear and premature failure.

Questions? Call Recreatives Industries at 1-800-255-2511
8:30 AM - 5:00 PM EST, Monday - Friday

ATTENTION!!!

Htc-attention.doc

THIS VEHICLE IS EQUIPPED WITH A HEATED THROTTLE CABLE.

PLEASE READ THE FOLLOWING FOR PROPER USE AND MAINTENANCE.

How to use the heated throttle cable:

The red toggle switch mounted on the dashboard controls the heating element for the throttle cable. The "up" position is power on and the "down" position is power off. The switch will light up when the power is on. The cable can only be turned on when the key switch is in the Lights/Run or Run position. When the key switch is off, the throttle cable element will also be off automatically.

Before starting the vehicle in cold weather, check the throttle lever for free movement. DO NOT force the lever if it will not move! Before starting the engine, turn the key switch to the run position. Turn on the throttle cable heating element with the toggle switch. Leave the cable on for about 10 minutes and check the throttle lever for free movement. If the lever now moves easily, start the engine as described in your owner's manual. If the throttle lever will still not move easily, leave the throttle cable heating element on and check for any obstructions causing the cable to stick. A frozen cable should thaw in about 5 to 10 minutes. If you find an obstruction or if the cable will not thaw, please consult your dealer or call Recreatives Industries at 1-800-255-2511.

You may use your vehicle with the throttle cable heating element on at all times without any loss of charge in the battery system or damage to the cable system.

CAUTION!!! DO NOT LEAVE THE VEHICLE UNATTENDED WITH THE THROTTLE CABLE HEATING ELEMENT ON!!! IT WILL DISCHARGE THE BATTERY AND MAY CAUSE DAMAGE TO THE ELECTRICAL SYSTEM.

Maintenance

Check the cable loom and wire terminals at regularly scheduled maintenance intervals (every 10 hours) for wear. A hole in the loom may cause the heating element to short out resulting in a blown fuse, broken heating element, and/or a possible fire hazard.

If the fuse should blow, you may replace it with a 2 amp ATC automotive style fuse. Before replacing the fuse, check the heating element and wire system for any indication of why the fuse blew. If the system is O.K., replace the fuse. The fuse holder towards the front of the vehicle is for the throttle cable heating system.

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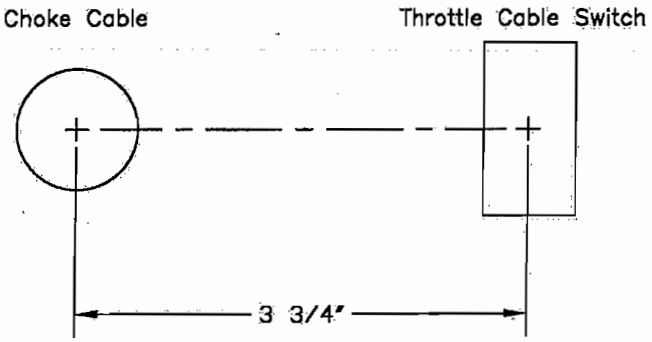

Figure I

Max IV

Left Side View

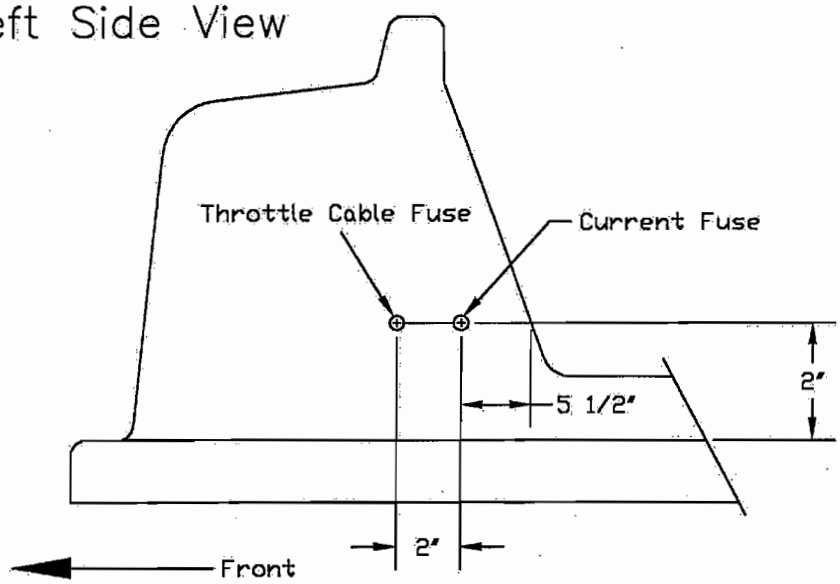

figure II maxIV_cable switch

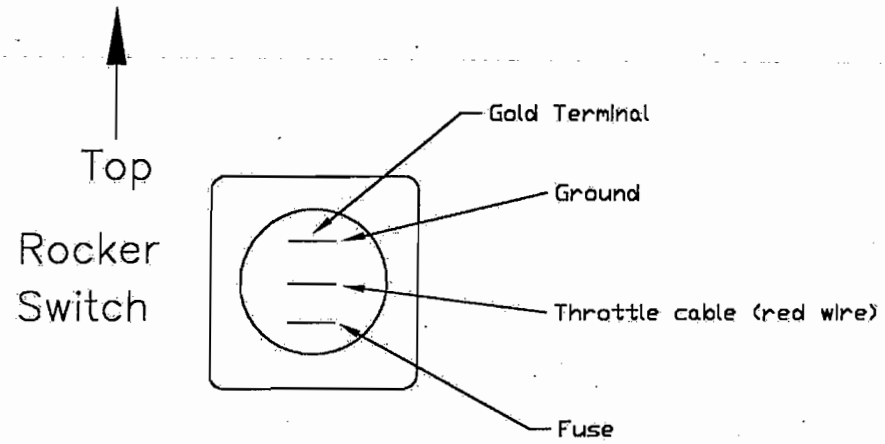

Figure III

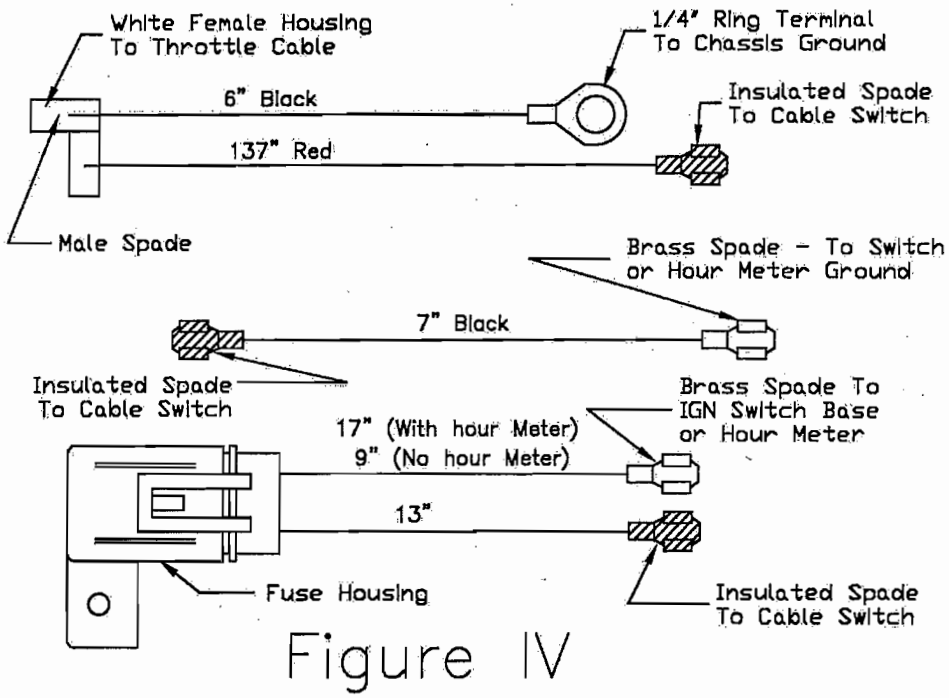

Figure IV

throttle_cable switch-wiring-maxiv