1985-1992 Pontiac Firebird/Trans Am Odometer Gear Replacement

By Atlanta Speedometer, Inc

Start by removing the speedometer head with its accompanying circuit board. You can gently move the needle with your finger and see the movement underneath move in conjunction with the needle. The movement is pictured (Figure 1). You can hold the movement underneath to remove the needle by twisting it off.

Once the needle is removed, remove the small black screws holding the face and clear diffuser to expose the stepper and odometer housing. Remove the 2 screws on either side of the odometer housing to separate it from the stepper(movement) housing (Figure 2). Be very gentle with the stepper housing and needle shaft, because they can be easily damaged. After the two housings have been separated you will remove the 2 screws for the odometer motor and set it aside.

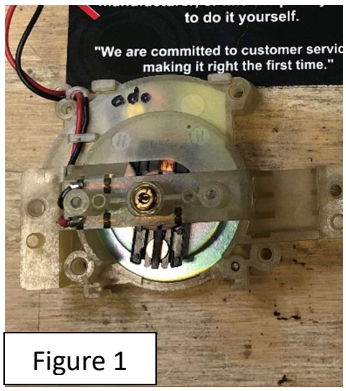

Figure 1

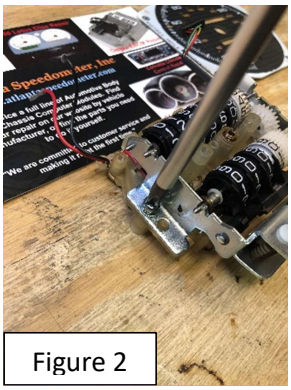
Figure 2

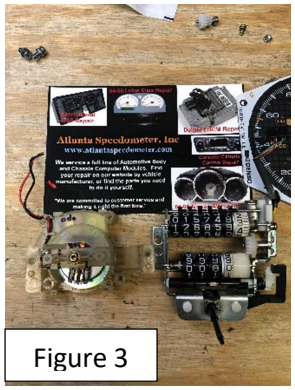

Figure 3

Figure 4


Figure 5

You will be replacing the gear marked in the picture (Figure 5). Next get a small pair of pliers or snip and slowly crush the already bad plastic gear (Figure 6) to remove it from its shaft (keep the pliers away from other parts). Once the old gear has been removed you need to remove the shaft completely. While you can use a drill bit to perform this step, I wouldn't recommend trying. It's too easy to move the original hole mess up the gearing alignment. A small cutoff wheel (Dremel) will work best. Make the shafts end flush with the odometer housing (Figure 8).

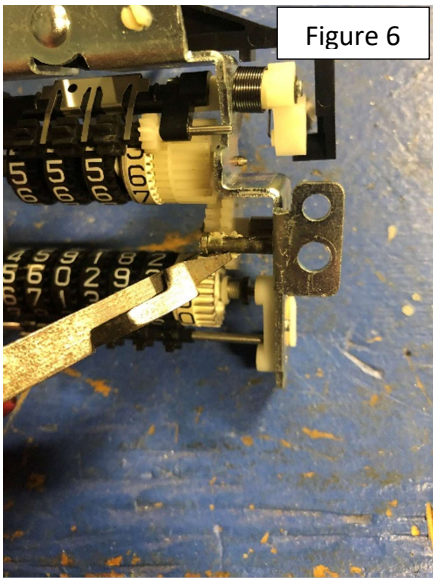
Figure 6


Figure 7


Figure 8

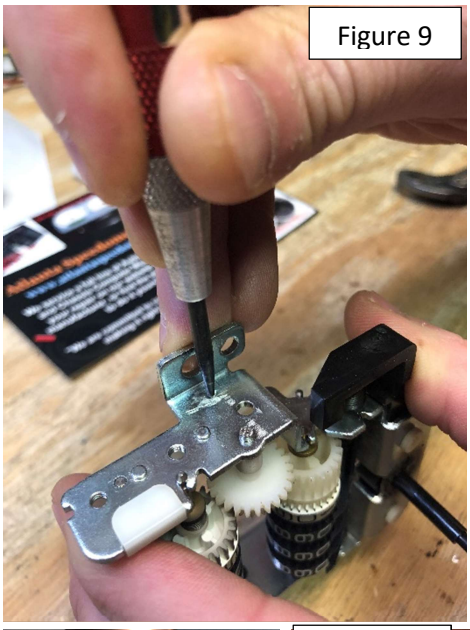
Figure 9

Using an automatic center punch, knock out the gear shaft (Figure 9). A punch and a hammer are not recommend unless the back surface of the housing is supported (the housing is not as strong as you think, it will bend and destroy plastic parts). (Figure 10) Mount the housing in a vise on a drill press to clear the hole with a 3/32nd drill bit. (Figure 11) Tap the hole with a 4-40 thread tap and blow away any metal shavings with compressed air. (Figure 12)Thread in new gear and post. These are small threads, so make it snug but don't overtighten. (Figure 13). Apply small drop of locktight and install nut to back of gear shaft. Be careful with the locktight (Do not let it seep down onto the gear.)

Note: make sure gear spins freely before installing


Figure 10

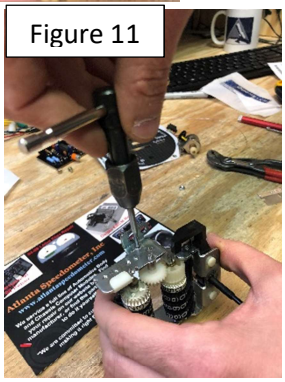
Figure 11

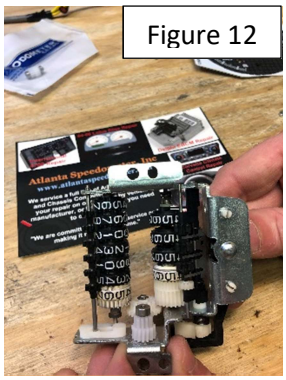
Figure 12


Figure 13

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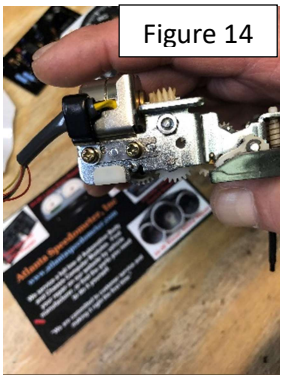

Figure 14

Figure 15

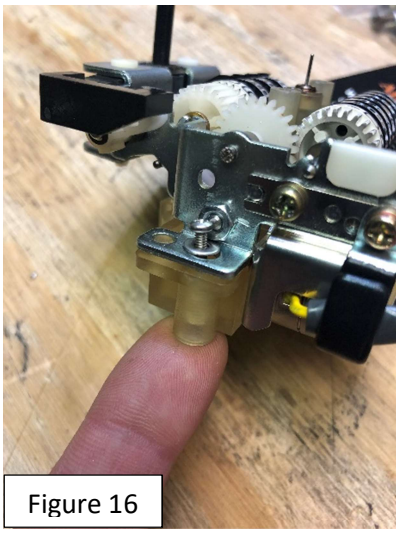

Figure 16

(Figure 14) Reinstall odometer motor. (Figure 15) Place stepper and odometer housing back together and install the left screw only. The screw for the right side will not be reused. (Figure 16) You will use the supplied small 2-56 screw, standoff, and washer in place of the factory screw closest to new gear.

Figure 17

Reassemble speedometer head in reverse order. (Figure 17) The needle should stop at the same spot shown to be properly calibrated at factory specification. Atlanta Speedometer, Inc does not provide technical support for the repair. We can repair the head for you if you are not comfortable with grinding, tapping, and testing. Keep in mind, if any of the movements are damaged during this repair it will likely require a replacement unit. Some things can't be repaired due to parts availability.

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