

# 350Z MANUAL TRANSMISSION EXTERNAL SPEEDOMETER PICKUP



## INSTALLATION INSTRUCTIONS

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### **!!NOTICE!!**

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### **!!WARNING!!**

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## BEFORE YOU BEGIN:

Installation of the LOJ Conversions Z33SW-SPDO external speedometer pickup is a straightforward installation. There are three major steps to follow. One is following standard practices for driveshaft yolk replacement. The second is simply bolting on the pickup bracket. The third is wiring the speedometer pickup.

Please ensure that all of the components required for your installation have been included in your package. This will include:

- 1310 Driveshaft Yolk with 10 Tooth Reluctor Ring Pre-Installed
- Hardware (Bolts for holding bracket to transmission)
- Pickup Bracket
- Dual-Output Sensor
- Crimp Connectors and Heat Shrink

## !!NOTICE!!

**This external speedometer pickup will ONLY WORK on vehicles with an INDEPENDENT REAR SUSPENSION. Live axle vehicles will have movement of the yolk in and out of the transmission while the suspension cycles causing the pickup to move away from the sensor!!!**

## INSTALLATION PROCEDURE:

1. The first step for installation is the removal of the driveshaft from your car and swapping the transmission yolk on the front of your aftermarket one-piece driveshaft. 95% of all aftermarket driveshafts for import vehicles use the 1310 series U-Joint. If for some reason your current driveshaft does not have a 1310 series U-Joint, there are conversion joints available from companies like Spicer which will convert whatever your current driveshaft is to 1310 to be compatible with the included yolk.
2. Following standard automotive maintenance procedures, swap the driveshaft yolk from your current driveshaft to the one supplied in the speedometer pickup kit. If you are having a new driveshaft made, bring this yolk to a driveshaft shop to have them install it on your new driveshaft. If you are not confident or capable of swapping the yolk, any competent driveshaft shop will be able to do this for you for a nominal fee. There are numerous tutorials and how-to videos available online explaining how to do this task. Simply search for "Driveshaft U-Joint Replacement"
3. Once the yolk has been swapped, reinstall the driveshaft.
4. If your 350Z Transmission still has the factory counterweight bolted to the LH side of the tail housing, remove it now.
5. Install the speedometer pickup bracket onto the transmission tail housing using the supplied hardware. Align either one of the large round threaded holes with the toothed ring on the

driveshaft yolk. Use whichever hole is easier to align, there are multiple holes to facilitate alignment with the yolk in a wide range of positions.

6. Once aligned, tighten the supplied mounting bolts to 15 ft-lb of torque.
7. Now, thread the sensor into the hole that you aligned with the reluctor ring on the driveshaft yolk. Thread the sensor in until the gap between the pickup in the center of the sensor is 1 to 1.5mm (0.040" to 0.170") from the reluctor ring. Feeler Gauges are a useful tool for setting this gap. (Please see the image below to clarify installation)



8. Once the gap is set, use a wrench to tighten the jam nut to lock the sensor in place. To prevent the sensor from turning, you can hold the knurled end of the sensor with a pair of channel-lock pliers.
9. The speedometer pickup in this kit is a dual output sensor. This is especially useful in feeling one discrete signal to the speedometer, and a second discrete signal to the engine computer if needed. The pair of wires in the black sheathing is one sensor output, the yellow sheathing contains the second output. You do not need to connect both outputs if you do not need them, simply tape off the second output to prevent entanglement or damage.
10. For your specific vehicle installation will vary. For Nissans (S13, S14, Z32, Z31) in particular, the factory speedometer is fed by a pair of wires that end at the speedometer connector in the

transmission harness. Connect these two wires to the sensor wires coming out of either of the sensor outputs. Polarity does not matter. A signal conditioner WILL BE REQUIRED to scale the output to match whatever OEM speedometer you are using, every vehicle is different. If you are using an aftermarket speedometer, it can be calibrated to match this sensors output.

11. Optional: Connect the second sensor output to your GM or aftermarket engine computer.

Your installation is complete! Enjoy!