

# R32 GTR Speed Sensor Instructions

## **Items Included**

- Mounting Bracket
- Driveshaft reluctor
- Speed Sensor with lock nuts and unterminated harness



## **Installation**

1. Safely jack your car up and secure with jack stands
2. Remove the four bolts that hold the front half of the rear driveshaft to the transfer case output flange.
3. Pry the driveshaft off the output flange and move it to the side.
4. Slide the reluctor over the transfer case output flange and put the driveshaft back in place.
5. Reinstall the four driveshaft bolts, this time putting them through the reluctor on the backside of the output flange. Apply Loctite to the bolt threads. Do not reuse the factory lock washers under the nuts.
6. Bleed any 4WD pressure from the transfer case by breaking loose the bleed nipple on the transfer case actuator. Close this bleed quickly to ensure no air enters or you will need to bleed your ATTESSA system.

7. Remove the two bolts securing the transfer case actuator. If you have relieved the pressure the actuator will not fall out. If you are unsure simply remove only one bolt.
8. Install the speed sensor bracket as pictured and reinstall the actuator bolts. If you only removed one bolt, install the speed sensor bracket with the removed bolt, hand tighten, remove the remaining bolt, rotate the speed sensor bracket, and reinstall the second bolt.



9. Put the car into neutral and relieve the parking brake if it is on (ensure the rear wheels are in the air). Rotate the driveshaft by hand until one of the pickups on the reluctor is aligned with the sensor hole. Install the speed sensor with a lock nut on each side of the sensor mount. Do not tighten them. Adjust the sensor height to achieve .040" air gap from the sensor tip to the reluctor.
10. Rotate the driveshaft by hand to ensure the reluctor is installed correctly and is concentric. Air gap should be roughly .020" to .059".

11. Tighten the lock nuts. The sensor is thin wall aluminum. Simply make the nuts snug. **DO NOT OVERTIGHTEN.**
12. See below wiring instructions. Note that you will need wire in a pull-up resistor if your ECU does not have the ability to turn one on in the programming. Haltech users will not need to wire in a resistor.
13. **Set-up for Haltech Elite:**  
*Wiring Tab:* Wire signal to SPI3 | Edge – Rising | Sensor Type – Hall Effect | Pull Up – Enable  
*Calibration tab:* Number of teeth – 32 | Calibrate at any MPH  
 For a factory gear and tire height, 110,984 pulses at 20mph is a good starting calibration.

*Note: This kit can come with a silver or black sensor depending on availability. The wiring is different for both sensors.*

## Silver sensor wiring

## Black sensor wiring

### Single Channel Hall Effect Sensor M12x1.0

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Termination	
Wire Colour	Connection
Red	POWER (4.5-24VDC)
Blue	SIGNAL
Black	GROUND

Termination	
Wire Colour	Connection
BROWN	POWER (4.5-24VDC)
BLACK	SIGNAL
BLUE	GROUND

*Note: If needed, a pull-up resistor will be fitted between the power and signal wires.*

### Recommended pull-up resistor values (If wiring externally)

Volts (DC)	5	12	15
Ohms	1K	2.4K	3K

**Please take care when wiring this sensor as incorrect wiring will damage this sensor!**

**Do NOT reverse the polarity of active sensors as sensor damage will occur.**