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## TRQ ESA94904

# TRQ TPS Throttle Position Sensor User Manual

Model: ESA94904

## 1. INTRODUCTION

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This user manual provides essential information for the TRQ TPS Throttle Position Sensor, Model ESA94904. It covers product overview, compatibility, installation guidance, maintenance, troubleshooting, and specifications. Please read this manual thoroughly before installation and use to ensure proper function and longevity of your sensor.

## 2. PRODUCT OVERVIEW

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The TRQ TPS Throttle Position Sensor is a direct-fit, OE replacement component designed to accurately measure the throttle valve's position. This information is crucial for the engine control unit (ECU) to determine engine load, fuel delivery, and ignition timing, ensuring optimal engine performance and fuel efficiency.

- **Direct Fit, OE Replacement Throttle Position Sensor:** Engineered to match the original equipment specifications for a seamless fit and function.
- **Vehicle Specific:** Designed for specific vehicle applications. Always verify fitment information.
- **Aftermarket Reference Number(s):** TPS112.
- **Additional Specifications:** Refer to the 'Specifications' section for detailed technical data.



Figure 2.1: Front view of the TRQ TPS Throttle Position Sensor.



Figure 2.2: Angled view of the TRQ TPS Throttle Position Sensor, showing its compact design.



Figure 2.3: Top view of the TRQ TPS Throttle Position Sensor, highlighting mounting points.

# INSTALLATION VIDEO INCLUDED

1 BILLION  
VIEWS



**EXCLUSIVE ACCESS**  
OUR EXPERT MECHANICS PROVIDE **STEP-BY-STEP**  
**INSTRUCTIONS, PERSONALIZED TO YOUR VEHICLE.**

Figure 2.4: Close-up view of the electrical connector on the TRQ TPS Throttle Position Sensor.

### 3. COMPATIBILITY

This TRQ TPS Throttle Position Sensor (Model ESA94904) is compatible with a wide range of vehicles. It is crucial to verify the fitment information for your specific vehicle model, year, engine size, and VIN digit (if applicable) before purchase and installation. Below is a detailed list of compatible vehicles:

- 1991-95 Chevrolet C1500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 Chevrolet C1500 Truck V8 5.0L 8th Vin Digit H
- 1992-95 Chevrolet C1500 Truck V6 4.3L 8th Vin Digit Z
- 1991-95 Chevrolet K1500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 Chevrolet K1500 Truck V8 5.0L 8th Vin Digit H
- 1992-95 Chevrolet K1500 Truck V6 4.3L 8th Vin Digit Z
- 1995-97 Chevrolet S10 Pickup L4 2.2L 8th Vin Digit 4
- 1991-94 Chevrolet S10 Pickup V6 4.3L 8th Vin Digit Z
- 1991-95 GMC C1500 Truck V8 5.7L 8th Vin Digit K

- 1991-95 GMC C1500 Truck V8 5.0L 8th Vin Digit H
- 1992-95 GMC C1500 Truck V6 4.3L 8th Vin Digit Z
- 1991-95 GMC K1500 Truck V8 5.0L 8th Vin Digit H
- 1991-95 GMC K1500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 Chevrolet K2500 Truck V8 7.4L 8th Vin Digit N
- 1991-95 Chevrolet K2500 Truck V8 5.0L 8th Vin Digit H
- 1991-95 Chevrolet K2500 Truck V8 5.7L 8th Vin Digit K
- 1992-95 GMC K2500 Truck V6 4.3L 8th Vin Digit Z
- 1992-95 Chevrolet K2500 Truck V6 4.3L 8th Vin Digit Z
- 1992-93 Chevrolet S10 Pickup V6 2.8L 8th Vin Digit R
- 1998-03 Isuzu Rodeo L4 2.2L
- 1991-95 Chevrolet G20 V8 5.0L 8th Vin Digit H
- 1993-95 Chevrolet Camaro V6 3.4L 8th Vin Digit S
- 1991-95 Chevrolet C2500 Truck V8 5.0L 8th Vin Digit H
- 1991-95 Chevrolet C2500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 Chevrolet C2500 Truck V8 7.4L 8th Vin Digit N
- 1992-95 Chevrolet G20 V6 4.3L 8th Vin Digit Z
- 1992-95 Chevrolet C2500 Truck V6 4.3L
- 1991-95 Chevrolet K3500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 Chevrolet K3500 Truck V8 7.4L 8th Vin Digit N
- 2004-05 Chevrolet Aveo
- 1995-97 GMC S-15 Sonoma L4 2.2L 8th Vin Digit 4
- 1991-95 Chevrolet C3500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 Chevrolet C3500 Truck V8 7.4L 8th Vin Digit N
- 1991-94 GMC S-15 Sonoma V6 4.3L 8th Vin Digit Z
- 1991-95 GMC K2500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 GMC K2500 Truck V8 5.0L 8th Vin Digit H
- 1991-95 GMC K2500 Truck V8 7.4L 8th Vin Digit N
- 1991-94 Chevrolet Blazer V8 5.7L 8th Vin Digit K
- 1994-95 Chevrolet G20 V8 5.7L 8th Vin Digit K
- 1991-94 Chevrolet Blazer S10 V6 4.3L 8th Vin Digit Z
- 1992-95 GMC K2500 Truck V6 4.3L 8th Vin Digit Z
- 1995 Chevrolet Tahoe V8 5.7L 8th Vin Digit K
- 1991-96 Chevrolet G30 V8 7.4L 8th Vin Digit N
- 1995-97 Chevrolet Cavalier L4 2.2L 8th Vin Digit 4
- 1991-93 Chevrolet G20 V8 5.7L 8th Vin Digit K
- 1991-94 Chevrolet Astro V6 4.3L 8th Vin Digit Z
- 1993-95 Pontiac Firebird V6 3.4L 8th Vin Digit S
- 1991-93 Chevrolet Caprice V8 5.7L 8th Vin Digit 7
- 1991-93 Chevrolet Caprice V8 5.0L 8th Vin Digit E
- 1992-95 Chevrolet G30 V6 4.3L 8th Vin Digit Z
- 1991-95 GMC G2500 V8 5.7L 8th Vin Digit K
- 1991-95 GMC G2500 V8 5.0L 8th Vin Digit H
- 1992-95 GMC Yukon V8 5.7L 8th Vin Digit K
- 1995-96 Olds Cutlass Ciera L4 2.2L 8th Vin Digit 4

- 1992-95 GMC G2500 V6 4.3L 8th Vin Digit Z
- 1991-95 Chevrolet P30 V8 7.4L 8th Vin Digit N
- 1991-95 Chevrolet P30 V8 5.7L 8th Vin Digit K
- 1995-96 Buick Century L4 2.2L 8th Vin Digit 4
- 1991-95 GMC C2500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 GMC C2500 Truck V8 5.0L 8th Vin Digit H
- 1991-95 GMC C2500 Truck V8 7.4L 8th Vin Digit N
- 1992-93 GMC S-15 Sonoma V6 2.8L 8th Vin Digit R
- 1992 Chevrolet Camaro V8 5.0L 8th Vin Digit E
- 1991-95 GMC K3500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 GMC K3500 Truck V8 7.4L 8th Vin Digit N
- 1992-95 GMC Suburban K1500 V8 5.7L 8th Vin Digit K
- 1992-95 Chevrolet P30 V6 4.3L 8th Vin Digit Z
- 1992-95 Chevrolet Suburban K2500 V8 7.4L 8th Vin Digit N
- 1992-95 GMC C2500 Truck V6 4.3L
- 1992-93 Buick Roadmaster V8 5.7L 8th Vin Digit 7
- 1994-95 Chevrolet G30 V8 5.7L 8th Vin Digit K
- 1992-93 Chevrolet Caprice V6 4.3L 8th Vin Digit Z
- 1991-95 GMC C3500 Truck V8 5.7L 8th Vin Digit K
- 1991-95 GMC C3500 Truck V8 7.4L 8th Vin Digit N
- 1991-96 GMC G3500 V8 7.4L 8th Vin Digit N
- 1991-93 Chevrolet G30 V8 5.7L 8th Vin Digit K
- 1991-92 Pontiac Firebird V8 5.0L 8th Vin Digit E
- 1991-95 GMC G3500 V8 5.7L 8th Vin Digit K
- 1991-94 Isuzu Pup Pickup V6 3.1L 8th Vin Digit Z
- 1991-92 Cadillac Brougham V8 5.0L 8th Vin Digit E
- 1991-92 Cadillac Brougham V8 5.7L 8th Vin Digit 7
- 1992-95 GMC G3500 V6 4.3L 8th Vin Digit Z
- 1992-95 GMC Suburban C1500 V8 5.7L 8th Vin Digit K
- 1991-94 GMC Safari V6 4.3L 8th Vin Digit Z
- 1995-97 Pontiac Sunfire L4 2.2L 8th Vin Digit 4
- 1992-94 GMC Jimmy V6 4.3L 8th Vin Digit Z
- 1995-96 Chevrolet Corsica L4 2.2L 8th Vin Digit 4
- 1993 Cadillac Fleetwood V8 5.7L 8th Vin Digit 7
- 1992-95 GMC Suburban K2500 V8 7.4L 8th Vin Digit N
- 1992-95 GMC Suburban K2500 V8 5.7L 8th Vin Digit K
- 1987-89 Chevrolet Cavalier L4 2.0L 8th Vin Digit 1
- 1992-95 Chevrolet Suburban C2500 V8 7.4L 8th Vin Digit N
- 1996-97 Isuzu Hombre L4 2.2L 8th Vin Digit 4
- 2001-03 Isuzu Rodeo Sport L4 2.2L
- 1999-00 Isuzu Amigo L4 2.2L
- 1990-91 Chevrolet Cavalier L4 2.2L 8th Vin Digit G
- 1991-92 Isuzu Rodeo V6 3.1L 8th Vin Digit Z
- 2004 Suzuki Forenza L4 2.0L
- 1991-95 Chevrolet Lumina APV V6 3.1L 8th Vin Digit D

- 1991-95 Chevrolet G10 V8 5.0L 8th Vin Digit H
- 1992 Isuzu Pup Pickup L4 2.3L
- 1992-94 Pontiac Sunbird L4 2.0L 8th Vin Digit H
- 1999-02 Daewoo Lanos L4 1.6L 8th Vin Digit 6
- 1992-95 Chevrolet G10 V6 4.3L 8th Vin Digit Z
- 1991 Chevrolet Suburban V1500 V8 5.7L 8th Vin Digit K
- 1995-96 Chevrolet Beretta L4 2.2L 8th Vin Digit 4
- 1991-95 Pontiac Trans Sport V6 3.1L 8th Vin Digit D
- 1991 GMC Jimmy S-15 V6 4.3L 8th Vin Digit Z
- 1991 Chevrolet Suburban V2500 V8 5.7L 8th Vin Digit K
- 1990-91 Chevrolet Corsica L4 2.2L 8th Vin Digit G
- 1991 Chevrolet Suburban R1500 V8 5.7L 8th Vin Digit K
- 1998 Isuzu Amigo L4 2.2L 8th Vin Digit D
- 1992-95 GMC Suburban C2500 V8 7.4L 8th Vin Digit N
- 1992-95 GMC Suburban C2500 V8 5.7L 8th Vin Digit K
- 1991-93 Chevrolet G10 V8 5.7L 8th Vin Digit K
- 1991 GMC Suburban V1500 V8 5.7L 8th Vin Digit K
- 1999-00 Daewoo Nubira
- 1991-92 Olds Custom Cruiser V8 5.0L 8th Vin Digit E
- 1999-00 Daewoo Leganza L4 2.2L
- 1987-89 Chevrolet Corsica L4 2.0L 8th Vin Digit 1
- 1987-89 Chevrolet Beretta L4 2.0L 8th Vin Digit 1
- 2001-02 Daewoo Leganza L4 2.2L 8th Vin Digit 2
- 1991 Chevrolet R3500 Truck V8 7.4L 8th Vin Digit N
- 1991 Chevrolet R3500 Truck V8 5.7L 8th Vin Digit K
- 1990-91 Chevrolet Beretta L4 2.2L 8th Vin Digit G
- 2001-02 Daewoo Nubira L4 2.0L 8th Vin Digit Z
- 1991-94 Olds Silhouette V6 3.1L 8th Vin Digit D
- 1991 GMC Jimmy V8 5.7L 8th Vin Digit K
- 1991-92 Olds Bravada V6 4.3L 8th Vin Digit Z
- 1991 GMC Suburban R1500 V8 5.7L 8th Vin Digit K
- 1991 Chevrolet Suburban R2500 V8 7.4L 8th Vin Digit N
- 1991 Chevrolet Suburban R2500 V8 5.7L 8th Vin Digit K
- 1991 Chevrolet V3500 Truck V8 7.4L 8th Vin Digit N
- 1991 Chevrolet V3500 Truck V8 5.7L 8th Vin Digit K
- 1992 Olds Custom Cruiser V8 5.7L 8th Vin Digit 7
- 1991 Buick Roadmaster V8 5.0L 8th Vin Digit E
- 1991-95 GMC G1500 V8 5.0L 8th Vin Digit H
- 1992-95 GMC G1500 V6 4.3L 8th Vin Digit Z
- 1991 GMC Suburban V2500 V8 5.7L 8th Vin Digit K
- 1988 Pontiac Grand Am L4 2.3L 8th Vin Digit D
- 1991 GMC R3500 Truck V8 7.4L 8th Vin Digit N
- 1991 GMC R3500 Truck V8 5.7L 8th Vin Digit K
- 1991-93 GMC G1500 V8 5.7L 8th Vin Digit K
- 1991 GMC Suburban R2500 V8 5.7L 8th Vin Digit K

- 1991 GMC Suburban R2500 V8 7.4L 8th Vin Digit N
- 1987-89 Buick Skyhawk L4 2.0L 8th Vin Digit 1
- 1991 GMC V3500 Truck V8 7.4L 8th Vin Digit N

For the most accurate and up-to-date compatibility information, please refer to the product listing or consult with a qualified automotive professional.

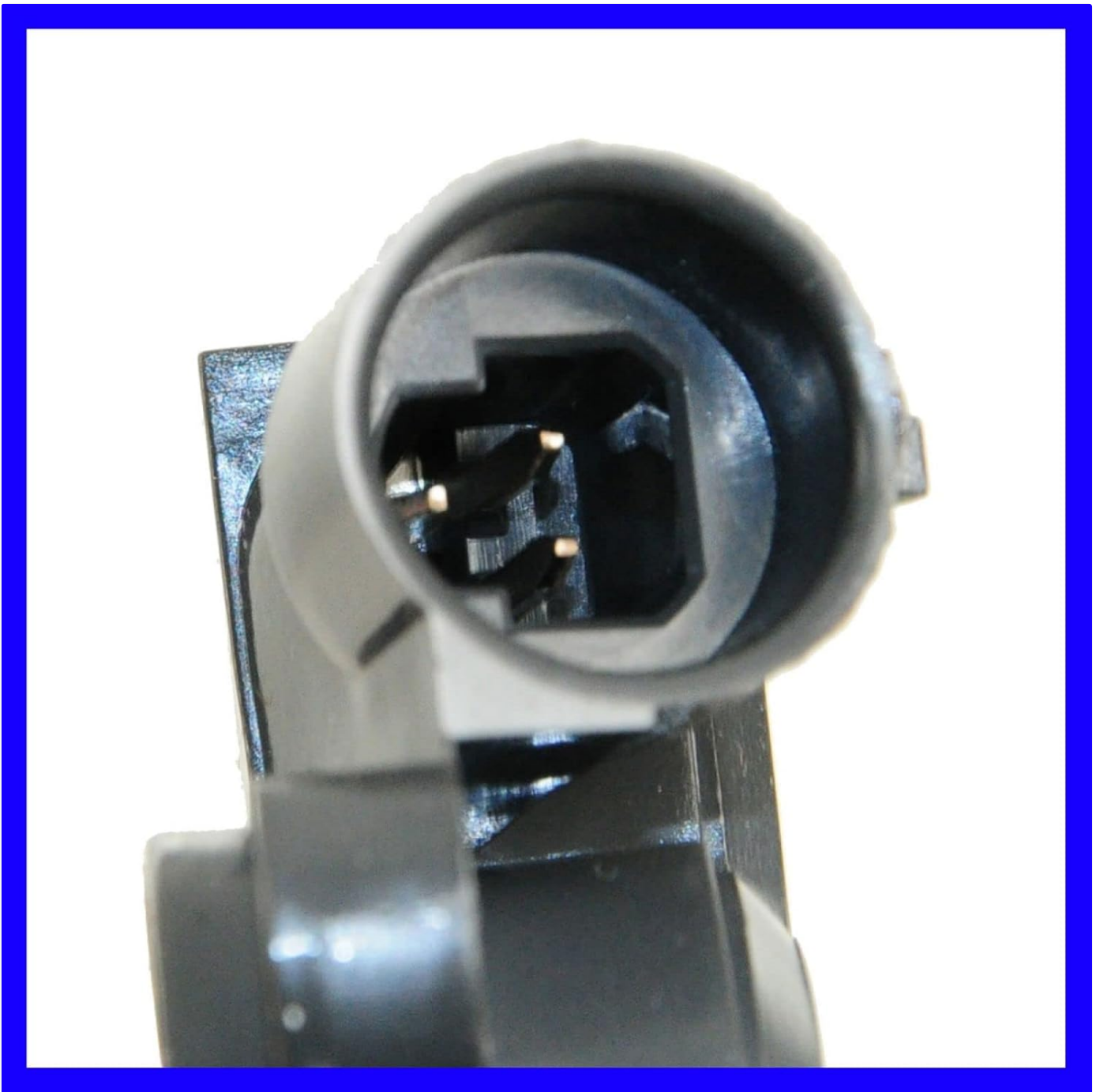


Figure 3.1: Always verify fitment to ensure compatibility with your vehicle.

## 4. WHAT'S IN THE BOX

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Upon opening the package, you should find the following component:

- 1 x Throttle Position Sensor

Please inspect the sensor for any signs of damage during shipping before proceeding with installation.

## 5. SETUP AND INSTALLATION

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Installation of a Throttle Position Sensor typically involves working with sensitive engine components. It is highly recommended that installation be performed by a certified automotive technician. If you choose to perform the installation yourself, ensure you have the necessary tools, safety equipment, and technical knowledge.

### **General Installation Steps (Consult a service manual for your specific vehicle):**

1. **Safety First:** Disconnect the vehicle's battery to prevent electrical shorts and accidental engine starts. Allow the engine to cool down.
2. **Locate the TPS:** The Throttle Position Sensor is usually mounted on the throttle body of the engine.
3. **Disconnect Wiring:** Carefully disconnect the electrical connector from the old TPS.
4. **Remove Old Sensor:** Unbolt and remove the old TPS. Note its orientation for correct installation of the new sensor.
5. **Install New Sensor:** Mount the new TRQ TPS sensor, ensuring it is correctly aligned with the throttle shaft. Secure it with the bolts.
6. **Reconnect Wiring:** Reconnect the electrical connector firmly.
7. **Reconnect Battery:** Reconnect the vehicle's battery.
8. **Perform Relearn Procedure (if necessary):** Some vehicles may require a throttle position sensor relearn procedure after replacement. Consult your vehicle's service manual for specific instructions.

### **Installation Videos:**

TRQ provides an extensive "View Before You Do" video library with step-by-step installation guides for many automotive parts. While specific videos cannot be embedded here due to content creator type restrictions, we encourage you to visit the official TRQ website or their dedicated video channels to find detailed installation instructions relevant to your vehicle and this sensor.



# IMPORTANT



## VERIFY FITMENT BEFORE PLACING YOUR ORDER.

Complete fitment information  
in the Product Description below.

Figure 5.1: TRQ offers comprehensive installation videos to assist with the process.

## 6. OPERATING PRINCIPLE

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The Throttle Position Sensor (TPS) is a critical component of your vehicle's engine management system. It is a potentiometer that is mechanically linked to the throttle body's butterfly valve. As the accelerator pedal is pressed, the butterfly valve opens, and the TPS rotates, changing its electrical resistance. This change in resistance sends a varying voltage signal to the vehicle's Engine Control Unit (ECU).

The ECU uses this voltage signal to determine the throttle opening angle, which directly correlates to the driver's power demand. Based on this input, the ECU calculates the appropriate fuel injection quantity, ignition timing, and other engine parameters to ensure smooth acceleration, optimal fuel economy, and reduced emissions. A properly functioning TPS is essential for the vehicle's drivability and overall performance.

## 7. MAINTENANCE

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The TRQ TPS Throttle Position Sensor is designed for long-term reliability and typically requires minimal maintenance. However, regular vehicle maintenance and occasional inspection of related components can help ensure its continued optimal performance:

- **Regular Inspections:** During routine vehicle servicing, visually inspect the TPS and its wiring harness for any signs of damage, corrosion, or loose connections.

- **Cleanliness:** Ensure the throttle body area, where the TPS is mounted, remains clean and free of excessive carbon buildup or debris, which could affect throttle plate movement and sensor accuracy.
- **Wiring Integrity:** Check the electrical connector and wiring for fraying, cracks, or signs of heat damage.
- **Professional Check-ups:** If you suspect any issues with your vehicle's throttle response or engine performance, have a qualified technician diagnose the system, including the TPS.

## 8. TROUBLESHOOTING

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A faulty Throttle Position Sensor can lead to various drivability issues. If you experience any of the following symptoms, the TPS may be a contributing factor:

- **Check Engine Light (CEL) Illumination:** The most common indicator. Diagnostic Trouble Codes (DTCs) related to the TPS (e.g., P0120, P0121, P0122, P0123) may be stored.
- **Rough Idling or Stalling:** Inaccurate throttle position readings can cause the engine to idle erratically or stall, especially when coming to a stop.
- **Hesitation or Surging During Acceleration:** The engine may hesitate or surge as you press the accelerator, indicating incorrect fuel or ignition timing.
- **Poor Fuel Economy:** Incorrect fuel delivery due to a faulty TPS can lead to increased fuel consumption.
- **No Start Condition:** In severe cases, a completely failed TPS can prevent the engine from starting.
- **Engine Revving Up Unexpectedly:** An intermittent or faulty signal can cause the engine RPM to fluctuate or rev without accelerator input.

### Troubleshooting Steps:

1. **Scan for DTCs:** Use an OBD-II scanner to retrieve any stored diagnostic trouble codes. A code like P0121 (Throttle Position Sensor/Switch A Circuit Range/Performance Problem) strongly indicates a TPS issue.
2. **Visual Inspection:** Check the sensor and its wiring for any visible damage, corrosion, or loose connections.
3. **Voltage Check:** A qualified technician can use a multimeter to check the voltage output of the TPS across its full range of motion. The voltage should increase smoothly as the throttle is opened.
4. **Professional Diagnosis:** If symptoms persist after basic checks, it is advisable to seek professional diagnosis from a certified mechanic.

*Note: A user review mentioned a sensor failing after one month, causing a "no start" condition and DTC code 21 for TPS. This highlights the importance of proper diagnosis and ensuring the quality of replacement parts.*

## 9. SPECIFICATIONS

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Detailed specifications for the TRQ TPS Throttle Position Sensor (Model ESA94904):

Specification	Value
Brand	TRQ
Model	TRQ ESA94904 Throttle Position Sensor
Item Model Number	ESA94904
Manufacturer Part Number	ESA94904
UPC	195591949040
Item Weight	1.6 ounces
Product Dimensions (L x W x H)	8 x 11 x 2 inches
Mounting Type	Flange Mount
Output Type	Push-Pull
Specific Uses For Product	Automotive
Exterior	Machined
Date First Available	August 24, 2023

## 10. WARRANTY INFORMATION

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Specific warranty terms for the TRQ TPS Throttle Position Sensor are provided by the manufacturer. Please refer to the warranty documentation included with your purchase or visit the official TRQ website for detailed information regarding warranty coverage, duration, and claims procedures. Retain your proof of purchase for warranty purposes.

## 11. SUPPORT

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For technical assistance, installation questions, or any other inquiries regarding your TRQ TPS Throttle Position Sensor, please contact TRQ customer support directly. Contact information can typically be found on the product packaging, the manufacturer's official website, or through the retailer from whom the product was purchased.

You may also find helpful resources, including additional installation videos and FAQs, on the TRQ brand store page or their official online channels.

Visit the TRQ Store: [TRQ Official Store](#)

