



TECH TIP

**COE HARSH SHIFT NO SPEED INPUT
FROM TURBINE SPEED SENSOR**

**GROUP: 0-GENERAL
TECH TIP NO: 23-021
DATE: 5-16-2023**

SUBJECT VEHICLES: Certain 13MY-20MY Cab-Over Engine (COE) Trucks equipped with a J05 engine and an Aisin Transmission

Note: This tech tip is provided as technical information and is not authorization for a warrantable repair.

OVERVIEW:

Subject vehicles may experience a harsh shift condition with no DTC (Diagnostic Trouble Codes) set. If this condition is experienced, inspect the transmissions turbine speed sensor for proper operation.

1. Using DX3, select **Transmission > Data Monitor and Active Tests > Data Monitor** then select the **Turbine** and **Engine** speed sensors, and click **OK**

[D1011]

Data monitor item configuration

System: 01 Transmission (AT) CAN

Filter: Select all

Search:

No.	ID	Items
01	3	Vehicle speed
01	4	Accelerator opening
01	5	Power supply voltage
01	6	Dealer Adjust Status Message
01	7	Dealer Adjust Failure Message
01	11	NSSW contact "PA"
01	12	NSSW contact "C"
01	13	NSSW contact "B"
01	14	NSSW contact "A"

Vehicle speed

Indicates present vehicle speed.

Sampling rate(ms): Real time

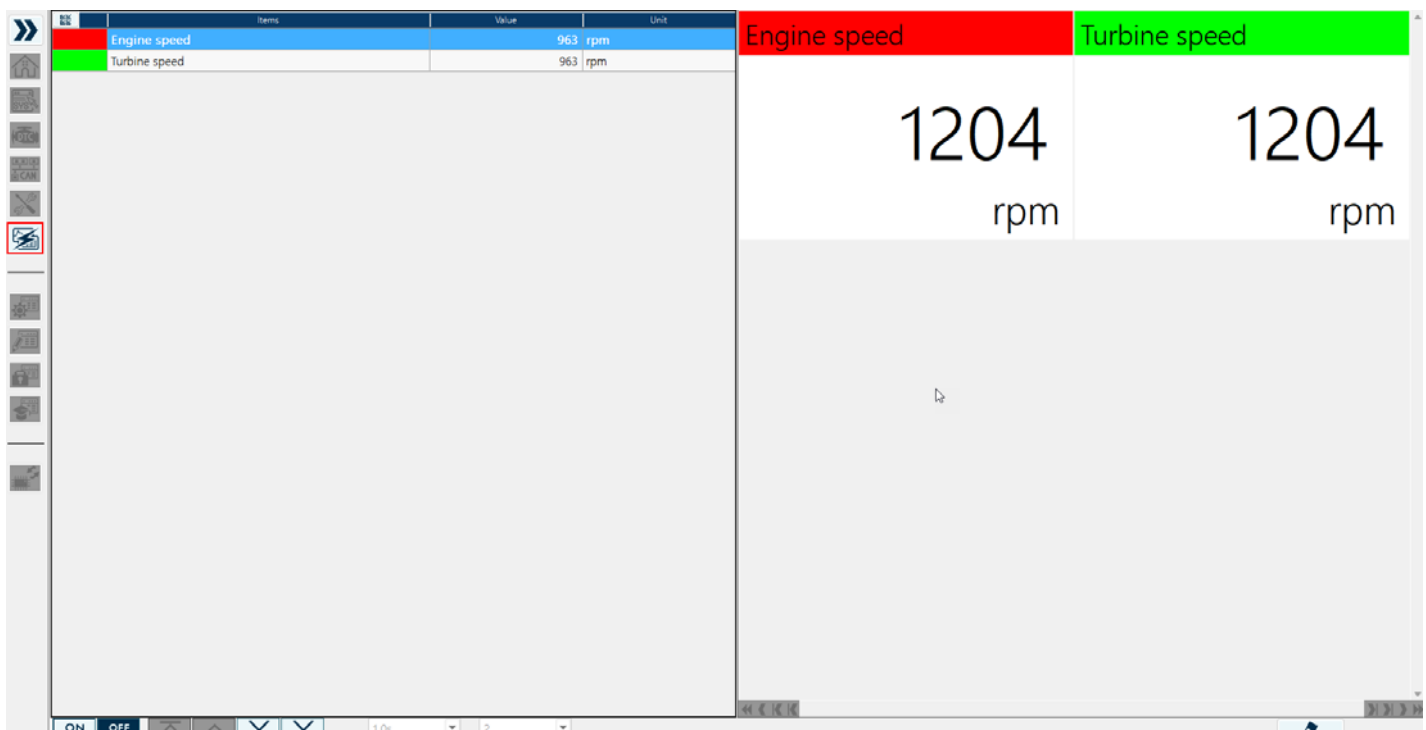
Trigger Configura... Setting

Save Read **OK** Cancel

No.	Items
01	Turbine speed
01	Engine speed

IMPORTANT: Place the truck in **PARK** with the **Parking Brake Applied**

2. Start the DX recording and start the trucks engine. Apply and hold the Brake Pedal (foot brake) while placing the transmission in to Drive or Reverse. Monitor the Turbine Speed Sensors rpm's while shifting from Park to Drive or Reverse, the rpm's should drop to zero (0) with the Brake Pedal (foot brake) applied. **DO NOT** release the Brake Pedal (foot brake) until the transmission is placed back to Park. Place the transmission back to park after completing inspection.



3. If the turbine speed Monitor Data reads zero all the time, the Turbine Speed Sensor could be unplugged, a faulted Turbine speed sensor, a broken wire in the insulation or harness concern. Please follow the wire diagram in the service manual to help isolate this concern.