

Dedicated Harness:

09X201

SOLENOID TEST: (Engine off)				
Solenoid	TranX Setting	Output Channel	Current Cold-Hot	Resistance Cold-Hot
Solenoid 1	Gear 1	1	0.5 - 0.3	25 - 46 Ω
Solenoid 2	Gear 2	2	0.5 - 0.3	25 - 46 Ω
Lock-Up (TCC)	Gear 5	5	0.5 - 0.3	25 - 46 Ω
Reverse Lockout (older models)	Gear 6	6	0.5 - 0.3	25 - 46 Ω
EPC (pulsed)	Gear 7	7	2.5 - 1.3 (@ 50% duty)	1.8 - 4.6 Ω

CAUTION:

Always come to a COMPLETE STOP & TURN ENGINE OFF before changing test modes

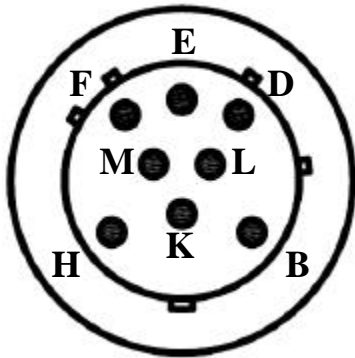
SHIFT/MONITOR TEST					
GEAR	Solenoid 1	Solenoid 2	Lock-Up	Reverse Lockout (Function 3)	EPC (pulsed)
1st	ON	ON	OFF	ON/OFF	Select Duty
2nd	OFF	ON	ON/OFF	OFF	Select Duty
3rd	OFF	OFF	ON/OFF	OFF	Select Duty
4th	ON	OFF	ON/OFF	OFF	Select Duty

Notes:

- ◆ **Reverse Lockout** is usually activated in **1st Gear** only.
- ◆ **Lock Up** is normally activated in 2nd, 3rd and 4th Gears.
- ◆ Polarity = Common **Positive**

Transmission: **BMW ZF 4HP 24/22 EH**

CONNECTOR:
(Looking into harness connector)



SENSOR TEST :

As standard the Vehicle Speed Sensor, located in the transmission, can be monitored on pins 5 & 6 of the Sensor Module. To verify operation please compare against the readings specified in the table.

Speed Sensor Test	
Connect Multimeter to Sensor Module Test Points 5 & 6	
Resistance	Comments
800 - 1600Ω	Ignition Off

COMMENTS :

The Speed Sensor type is Inductive - Dynamic tests can be made using your multimeter, measuring either Voltage AC or Frequency A.C.

An AC Voltage and frequency will be produced by the sensor, informing the transmission ECU the Vehicle's speed.

NOTE :

RESISTANCE MEASUREMENT'S MUST BE MADE WITH IGNITION OFF. IT MAY ALSO BE NECESSARY TO DISCONNECT THE ECU HARNESS IN SOME CASES.

Wiring Chart

Case Connector Pin Number	TranX 2000 Harness Wire	Vehicle Function	TranX 2000 Output Location	TranX 2000 25 Way Pin
F	White	Speed Sensor	Sensor 6 Test Point	20
E	Orange	Speed Sensor	Sensor 6 Test Point	19
D	Brown	Rev Lock Out Solenoid	Channel 6	4
M	Red	+12V to Solenoids		12
L	Violet	Lockup Solenoid	Channel 5	3
K	Green	Shift Solenoid 2	Channel 2	8
H	Blue	Shift Solenoid 1	Channel 1	7
B	Yellow	EPC Solenoid	Channel 7	1