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2017 Jeep Renegade Service and Repair Manual

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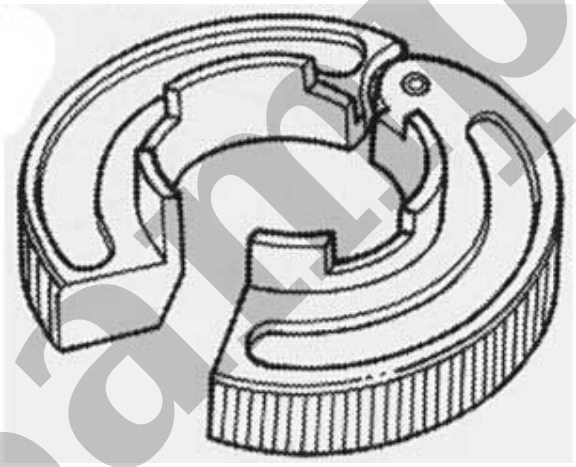
2 - Transmission Oil Cooler Lines

NOTE

Plug and seal the ends of the transmission oil cooler and the transmission oil cooler lines to prevent leakage of oil, or moisture, contaminates, or impurities from entering into the system.

4. Disconnect the transmission oil cooler lines from the transmission oil cooler using

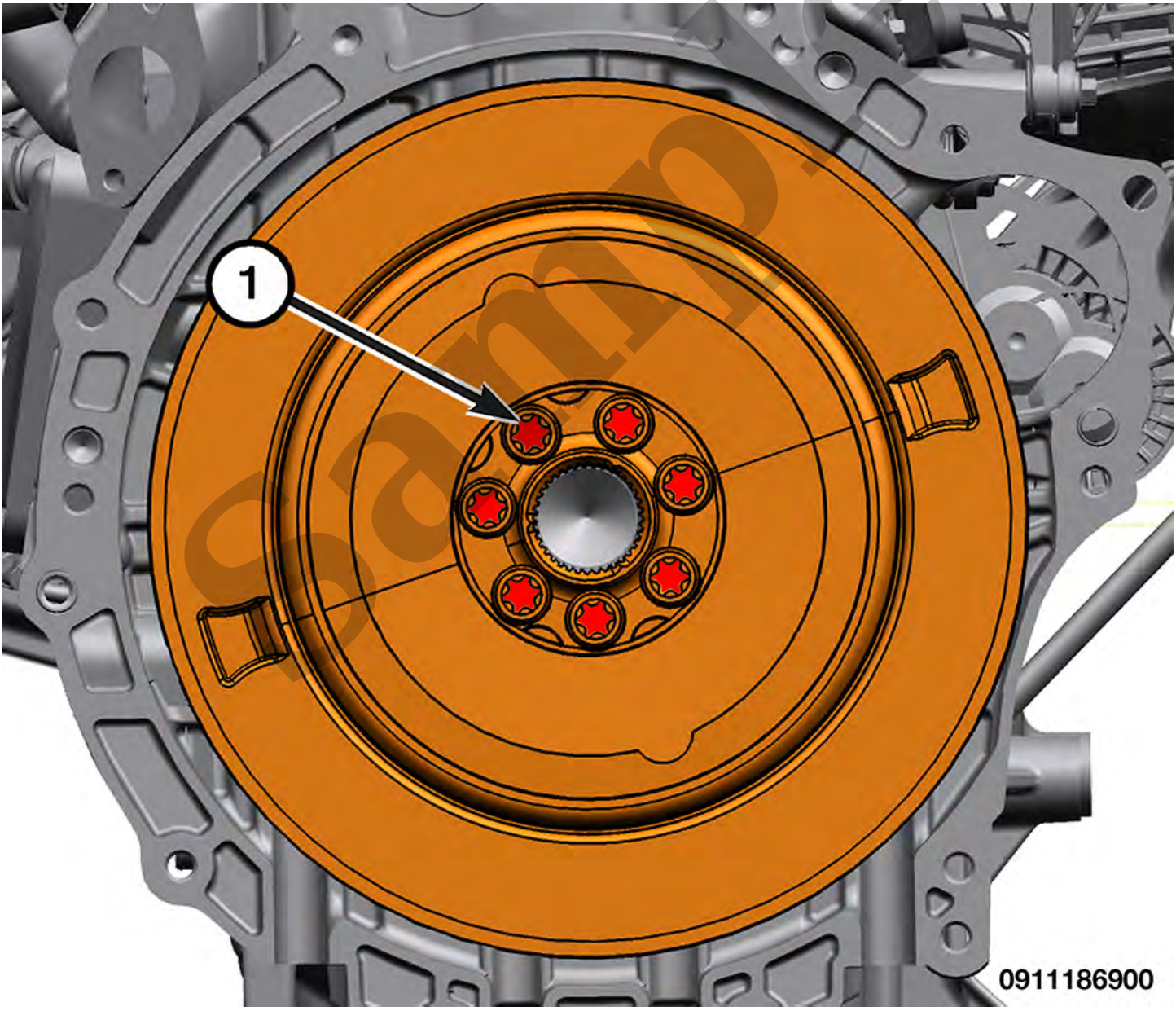
Disconnect Tool

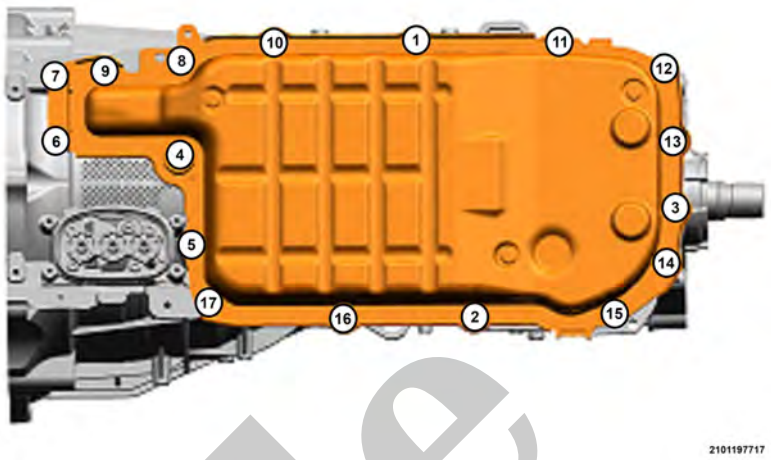


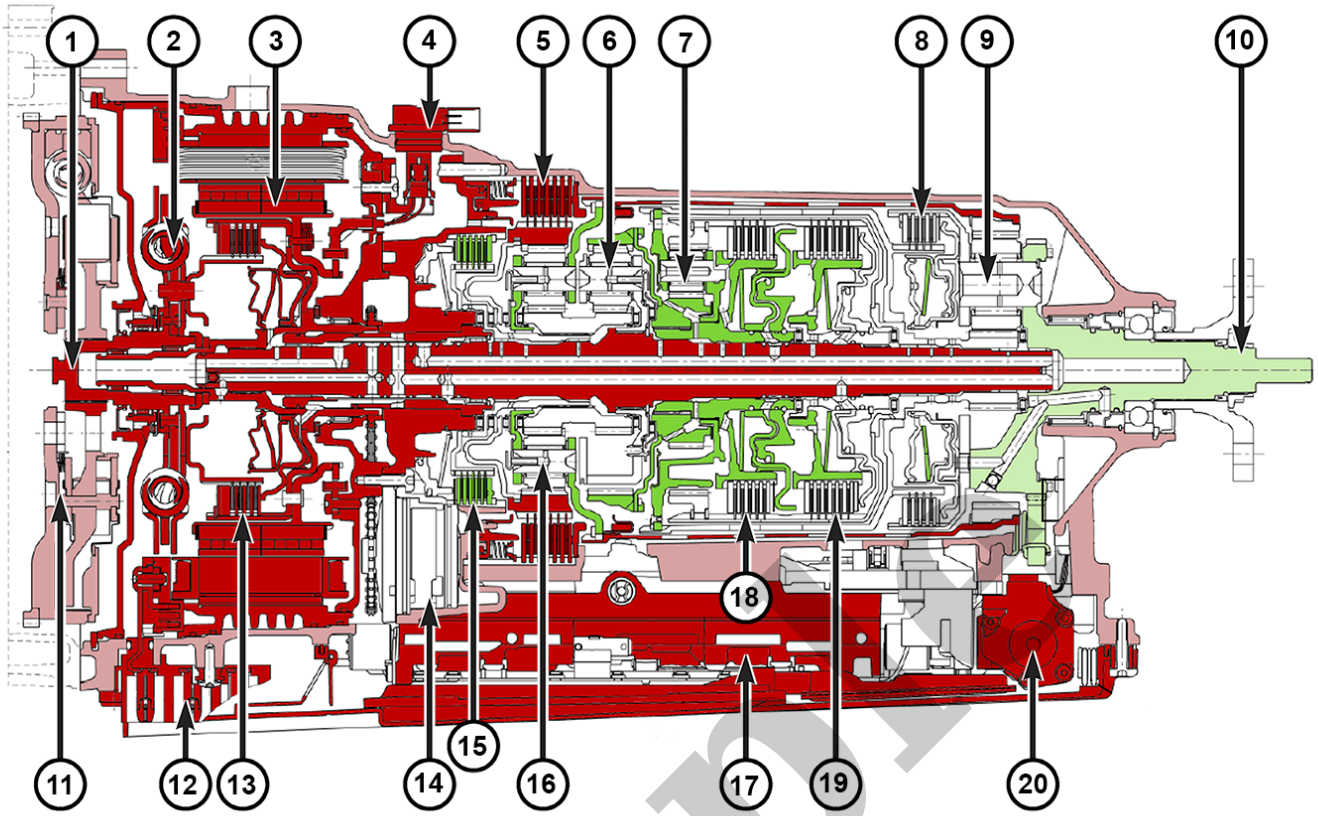
Torsional Damper

TORSIONAL DAMPER

REMOVAL



DESCRIPTION	SPECIFICATION	COMMENT
		
Transmission Oil Pan Drain Plug	**9 N·m (80 In. Lbs.)**	—
Transmission Oil fill Plug	**35 N·m (26 Ft. Lbs.)**	—
Transmission Mount to Adapter	**30 N·m (22 Ft. Lbs.)**	—
Transmission Support Bracket to Transmission	**17 N·m (12 Ft. Lbs.)**	—
Valve Body Bolt	**8 N·m (71 In. Lbs.)**	Tightening Sequence



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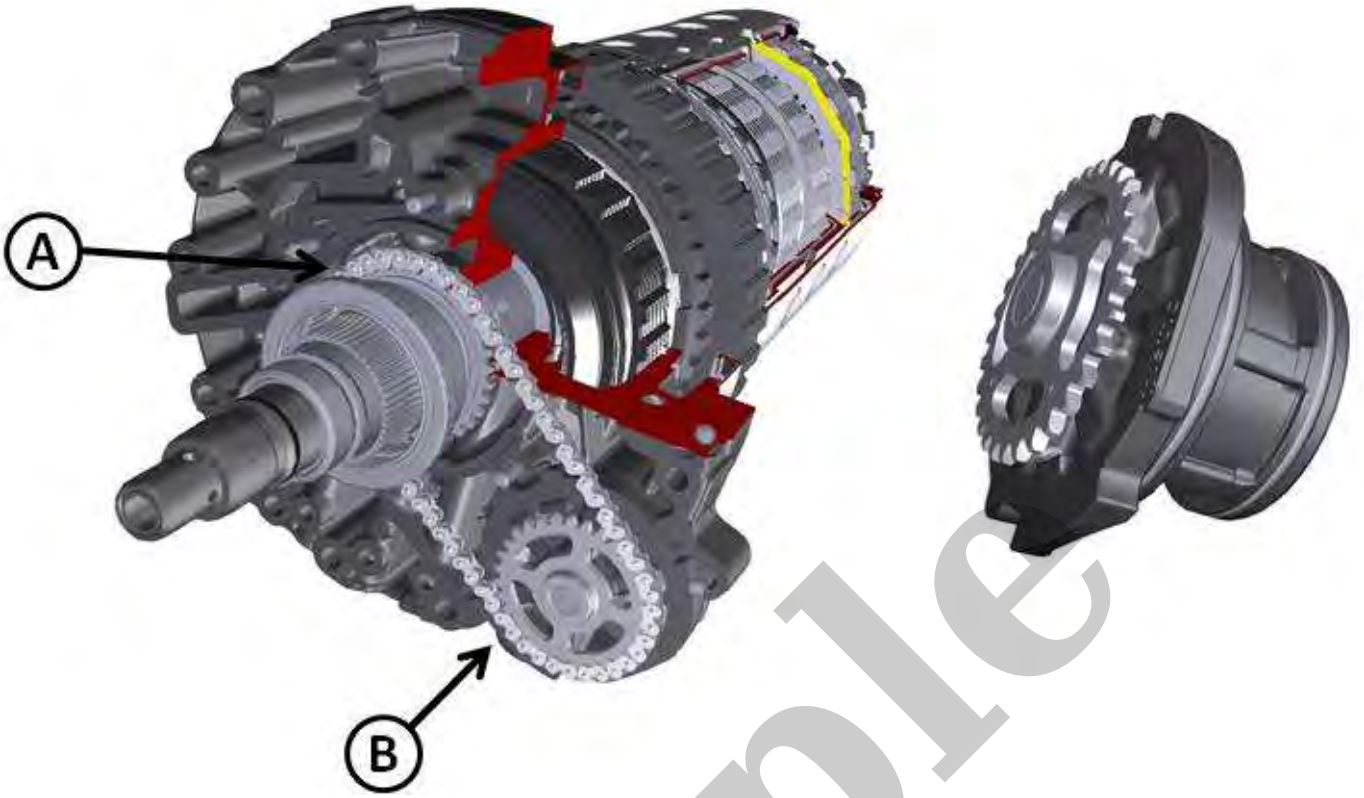
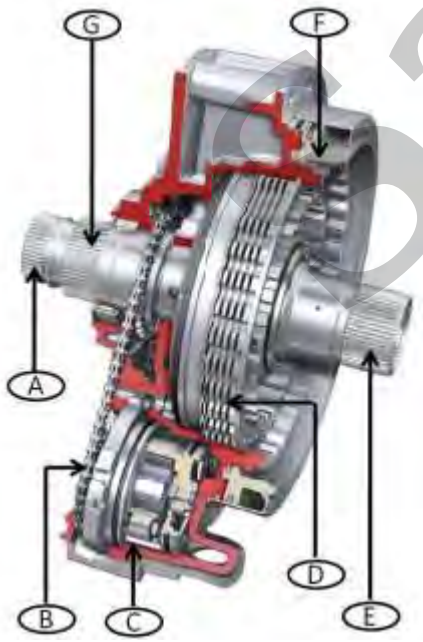
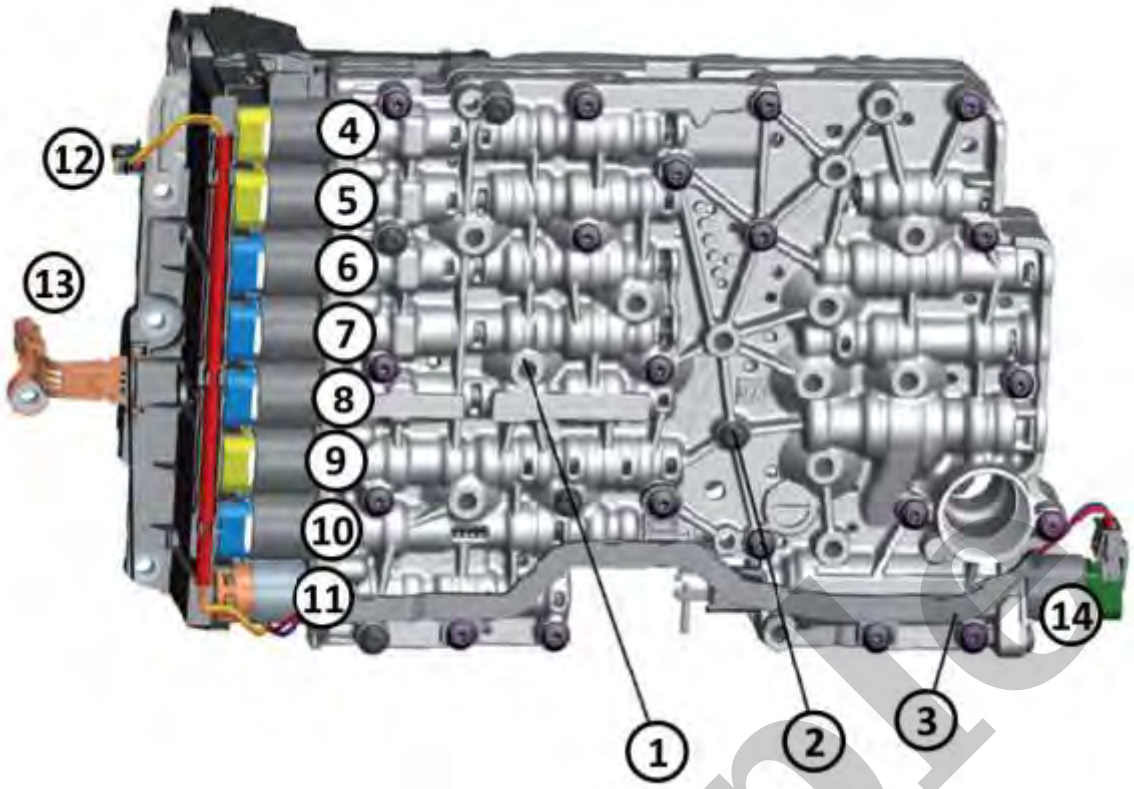
1 - Input Shaft	11 - Torsional Damper 1 (Engine Mounted)
2 - Torsional Damper 2 (Internal)	12 - High Voltage Connector
3 - Electric Motor	13 - K0 Clutch (Separation Clutch)
4 - Electric Motor Position Sensor (Resolver)	14 - Mechanical Oil Pump
5 - B Clutch (Integrated Launch Element)	15 - A Clutch
6 - P2 Planetary Set	16 - P1 Planetary Set
7 - P3 Planetary Set	17 - Valve Body Assembly
8 - D Clutch	18 - E Clutch
9 - P4 Planetary Set	19 - C Clutch
10 - Output Shaft	20 - Electric Oil Pump



The transmission oil pump (B) is driven by a chain and sprocket (A). The oil pump is located just K0 clutch (separation clutch), inside of the pump housing. The pump is a double-stroke vane pump. The pump has dual chambers, two inlet and two outlet ports. The pump provides necessary lubrication and cooling throughout all phases of transmission operation.

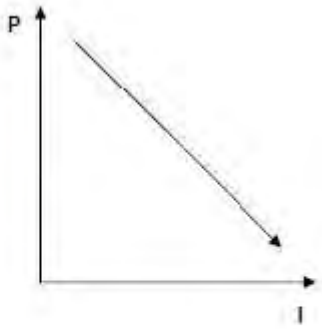


A - STATOR SHAFT	E - CENTRAL PLANETARY SHAFT FOR GEAR 1 AND 2



1 - M6 Valve Body Bolt Hole	8 - Solenoid C
2 - M5 Valve Body to Solenoid Body Bolt Hole	9 - K0 Clutch (Separation Clutch) Solenoid
3 - Wiring Harness for Park Release Solenoid	10 - Line Pressure Solenoid
4 - Solenoid A	11 - Park Release Solenoid
5 - Solenoid D	12 - Integrated Electric Pump (IEP) Local Area Network (LIN) Wire Harness Connector
6 - Solenoid B	13 - Output Shaft Speed (OSS) Sensor
7 - Solenoid E	14 - Park Hold Solenoid

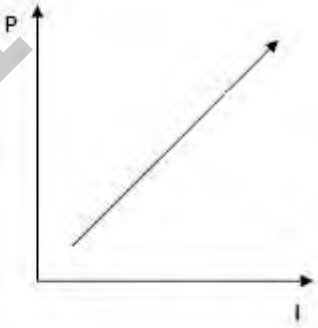
The valve body includes the TCM, all solenoids and sensors, and can be referred to as the TCMA. The TCM is attached to the valve body between the transmission case and the valve body. If any component of the valve body **including the TCM** , sensors or solenoids need replaced, the complete TCMA (valve body) must be



Technical data

Pressure range	as of 4.7 to 0 bar
Operating voltage	12 V
Resistance	5,05 Ω at –20°C
Characteristic curve	falling

- White/Orange transmission solenoids - These transmission solenoids have a rising characteristic curve (there is no control pressure when they are not powered).



Technical data

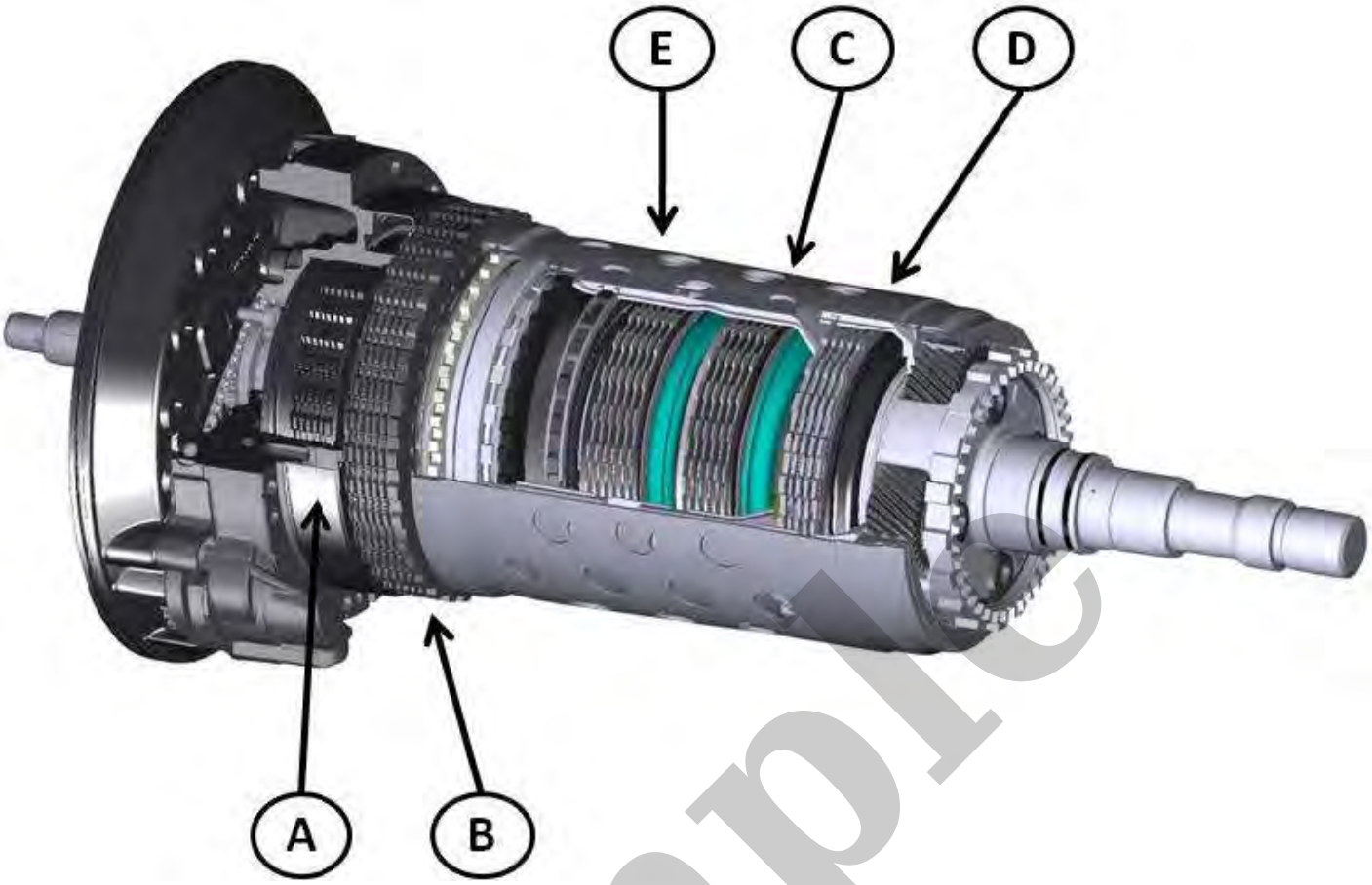
Pressure range	as of 0 to 4.7 bar
Operating voltage	12 V
Resistance	5,05 Ω at +20°C
Characteristic curve	rising

FUNCTIONAL DESCRIPTION - TRANSMISSION SPEED SENSOR

DESCRIPTION

CAUTION

The Transmission Control Module (TCM), or Transmission Control Module Assembly (TCMA) is extremely sensitive to Electrostatic Discharge (ESD). Always use a ground strap and follow the ESD guidelines in



There are five engagement elements divided as follows:

Brakes	A	B	
Clutches	C	D	E

The clutches and brakes operate as follows:

- Multiple-disc clutches C, D and E transmit the engine torque to the epicyclic gear train while brakes A and B offload the engine torque to the transmission housing.
- The engagement elements are hydraulically closed. The fluid pressure compresses the disc pack to engage the clutch. When the hydraulic pressure decreases, the diaphragm spring pushes the piston into its rest position.
- The engagement elements serve to engage the gears under load without interrupting the traction force.
- For each gear, three engagement elements are always closed while two engagement elements will always remain open. Each open engagement element creates drag torque which allows an increase in transmission efficiency.

BRAKES

Brake/Clutch Engagement Control Solenoid Valves

GEAR	Brake A	Brake B	Clutch C	Clutch D	Clutch E
NEUTRAL			X	X	X
REVERSE	X	X	X		X
1st	X	X		X	X
2nd	X	X	X	X	
3rd		X		X	
4th		X	X		
5th		X			X
6th					
7th	X				X
8th	X		X		

Engaged = X

FUNCTIONAL DESCRIPTION - PLANETARY GEAR COMPONENTS

Transmission Components