

# AVTEC 6600 Series Transmission



## RATINGS

Application	Input Power hp (kW)		Input Torque lb-ft (N.m)		Turbine Torque lb-ft ( N.m)
	Gross	Net	Gross	Net	Net
Hauling Applications	760 (567)	710 (529)	2500 (3390)	2270 (3078)	3790 (5139)
General	760 (567)	710 (529)	2500 (3390)	2270 (3078)	3790 (5139)
Agricultural Tractor	700 (522)	650 (485)	2000 (2712)	1860 (2522)	3340 (4528)
Aircraft Rescue (ARFF) Vehicle	1025 (764)	975 (727)	3300 (4474)	3000 (4068)	5200 (7050)
Oil Field General	760 (567)	710 (529)	2500 (3390)	2270 (3078)	3790 (5139)
Oil Field Dual Mode	900 (671)	850 (634)	2750 (3729)	2300 (3118)	4000 (5423)
Oil Field Stationary	900 (671)	850 (634)	2750 (3729)	2300 (3118)	4000 (5423)

## DRIVETRAIN INTERFACE

Acceptable full load engine governed speed (max)	<b>1900 - 2500 rpm</b>
Minimum engine idle speed range (with transmission in drive)	<b>550 rpm</b>

## MOUNTING

### DIRECT

SAE No 1 automatic flywheel housing with flex plate drive.  
Cradle mounting using engine flywheel housing mounting pads and rear cover mounting pads with 0.625-11 inch series bolts.

### REMOTE

Side pads on transmission rear cover plus front trunion mount.

TORQUE CONVERTER			MECHANICA RATIOS		
<b>Type</b>	Single stage, Three element , Polyphase		<b>(Gear ratios do not include torque converter multiplication)</b>		
Model	Stall Torque Ratio	Kp-Factor* at Stall	First	4.00:1	
TC - 680	2.08	54.6 (46.9)	Second	2.68:1	
TC - 682	1.77	43.7 (37.5)	Third	2.01:1	
TC - 683	1.85	35.1 (30.1)	Fourth	1.353:1	
Kp-Factor defines torque converter capacity			Fifth	1.00:1	
Kp= the ratio of converter pump speed (rpm) divided by the square root of the pump [lb-ft (N.m)].			Sixth	0.67:1	
			Reverse 1	-5.15:1	
			Reverse 2	-3.46:1	
			<b>Ratio Coverage</b>		
			Forward	5.97	

## CONTROL SYSTEM

Electronic, Other Options available - Manual electric, Manual hydraulic

SPEEDOMETER PROVISION MECHANICAL (OPTIONAL)		HYDRAULIC RETARDER PROVISION (OPTIONAL)	
<b>Type: SAE 5/32 Heavy Duty</b>		<b>Type: Coupling type rotor between fixed stator</b>	
Straight Thro' Models:	Output speed ratio 0.51:1	Torque	Power
Drop Box Models:	Output speed ratio 1:1	1500 lb-ft (2034N.m)	600hp(447Kw)
<b>Electronic Speedo Meter Provision</b>			
Description LS:	TTL Signal, 39 pulse per output shaft revolution		
Location:	Output signal from transmission TCM		

## OPTIONAL ENGINE DRIVEN POWER TAKE OFF PROVISION

Side Mount		
Location	5 o'clock position as viewed from rear	
PTO drive gear rating	Intermittent	46 tooth drive gear, 149kW (200hp)
	Continuous	46 tooth drive gear, 93kW (125hp)

Top Mount		
Location	12 o'clock position as viewed from rear	
PTO drive gear rating	Intermittent	46 tooth drive gear, 149kW (200hp)
	Continuous	46 tooth drive gear, 93kW (125hp)

**NOTE:**

PTO ratings apply to both top and side. Combined total cannot exceed individual ratings.

SIZE:	Depth (below horizontal centerline)	STRAIGHT-THRU: 20.1 in (511mm)	
		Basic	With Retarder
Length (direct mount)*		43.1 in (1095mm)	46.6 in (1182 mm)
Width		28.6 in (726 mm)	31.7 in (805 mm)
		Height	Dry Weight
Basic model		31.0 in (788 mm)	2200 lb (988 kg)
With top engine driven PTO drive Gears			2230 lb ( 1012kg)
With park Brake (12" x 5")			2260 lb (1025 kg)
With Remote Mount			2255 lb (1023 kg)
With Retarder			2365lb (1073 kg)

\*Length is approximate from engine/converter mounting surface to face of typical output flange.

For remote mounting add 10-11in (254-279mm) depending on flange selection.

## OIL SYSTEM

Oil Type	Hydraulic Transmission Fluid, Type C-4 (Based on Ambient operating condition SAE oil grade needs to be selected)
Capacity excluding external circuit	18.0 gallons (68 litres)
Drop box	13.0 gallons (49 litres)
Main circuit Oil Filter	
Standard	Direct-Mount full-flow, remote mounted, replaceable element
Cooler circuit filter (optional )	Remote mounted, Replaceable element

\*Information or specification subjected to change without notice or obligation.

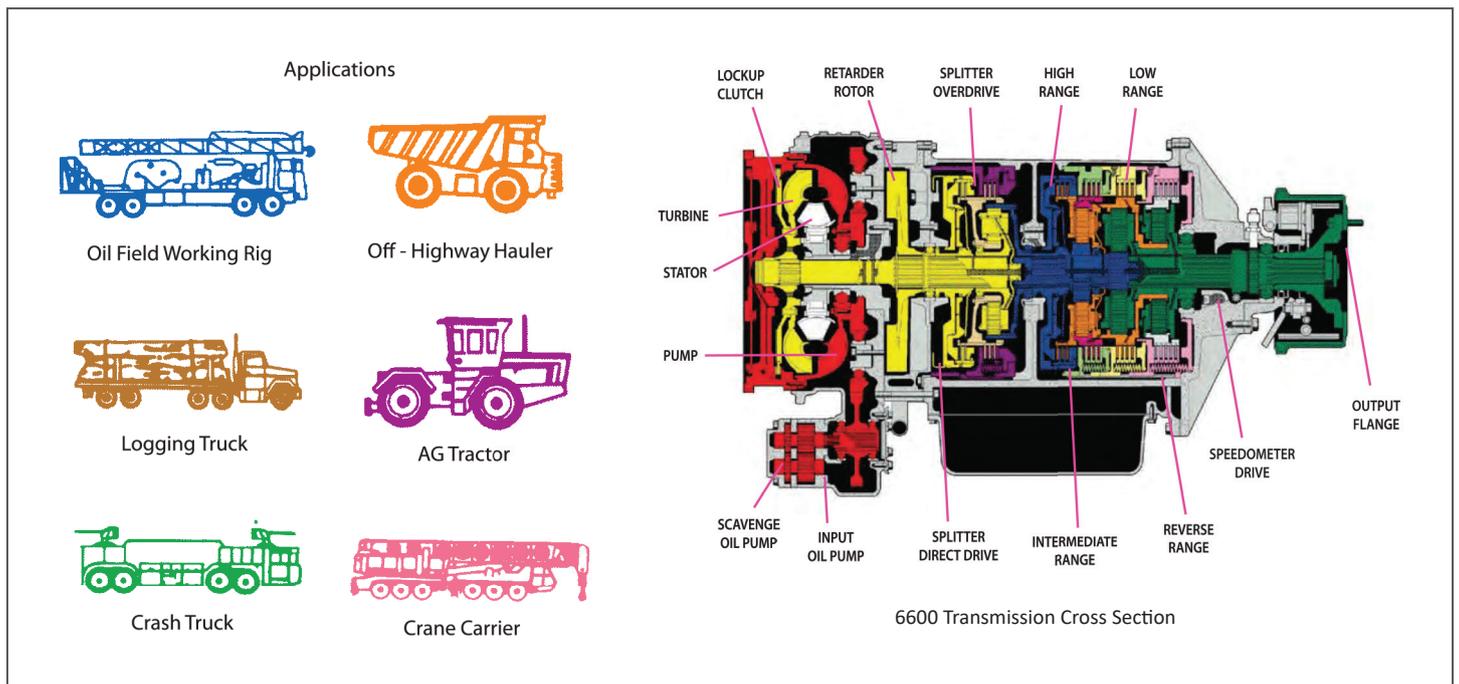
## DESIGN FEATURES & BENEFITS

- Designed for use with diesel engines ranging between 710 nhp (529 kW) to 975 nhp (727 kW). Six forward ranges and a choice of two reverse ratios. This transmission is typically used in on/off highway applications.
- Clutches are multidisc design, oil-cooled, hydraulically -operated, spring released and self-compensating for normal wear. Spur-type planetary gears are designed for strength and long life.
- The three-element torque converter provides smooth, shock-free operation. A choice of converters permits matching the transmission to a wide variety of engines.
- Electronic Controls provide: programmable features to perform vehicles and vocational requirements; built-in-diagnostics which constantly monitor operation and facilitate the detection of problems if they occur; improved fuel economy; specific vehicle and vocational needs.
- Manual hydraulic controls are available for use in oil field applications where electrical equipment use is prohibited.
- Manual electric controls are available for use in non-hauling applications including: oil field, stationary equipment and agricultural tractors.
- An optional parking brake (Bendix 12 x 5) is available.
- Main circuit oil filters are available with the transmission with remote mount provision. The remote mount configuration is a single element filter which can be mounted wherever convenient.
- A selection of optional driveline flanges is available.
- A speedometer drive is supplied with the transmission. The transmission output speed ratio is 0.51:1.
- Electronic speedmeter, neutral start and reverse signals are available with Electronic Controls.

## SCAAN SPECIFICATION ASSISTANCE

To be sure that you get the most efficient engine transmission matching for your operation, with your preferred vehicle, AVTEC offers SCAAN.

SCAAN stands for System for Computerized Application Analysis and helps eliminate guesswork from vehicle buying decisions. It can compute a wide variety of vehicle performance parameters. SCAAN will also check your powertrain specifications against AVTEC vocational experience to ensure satisfactory vehicle performance. SCAAN is user friendly. Interactive operation allows vehicle configurations to be quickly evaluated to ensure optimized powertrain selection.



## CAPABILITY HIGHLIGHTS

- The only Indian player with the capability to design and Manufacture Complete Transmission Aggregates and spares for the Off Highway industry.
- The business operates out of its modern manufacturing facility at Hosur and Chennai in Tamil Nadu, India.
- Supplies complete Hauling and Cycling, Powertrain and Automatic Transmission Aggregates in 50-3300 HP range for mining, construction, material handling, railways and Defence Application.
- Serves a broad array of applications including Loaders, Dump trucks, forklifts, Railway OHE cars, Cranes and Oil rigs.
- Significant experience in exports especially intricate components like shafts, planetary systems and large housings.
- All plants are accredited with international quality certification such as TS 16949, ISO 9001, ISO 14001 and TPM excellence award.