

Powertrain Division
Engineered Products



M/S 5610 Automatic/Powershift Hauling Transmission

SPECIFICATIONS

General rating +					
Net input power (max)	550 nhp (410 kW)				
Input speed (max)	2500 rpm				
Net input torque (max)	1750 lb ft (2373 Nm)				
Rotation					
Input (viewed from input)	Clockwise				
Output (viewed from input)	Clockwise (forward ranges)				
Mounting					
Direct	SAE # 1 automatic flywheel (WET) housing with flexdisc drive. Cradle mounted using engine flywheel mounting pads and transmission rear cover mounting pads with 5/8-11 bolts; drop box side pads if applicable.				
Remote	Trunnion mount and transmission rear cover side pads or drop box side pads if applicable.				
Torque converter					
Type	Single stage, 3-element				
Stall Torque ratio	TC580-2.89:1, TC680-Retarder-2.17:1 Non-Retarder-2.08:1, TC682-1.77:1, TC683-1.85:1				
Lockup clutch	Effective in all forward ranges				
Gearing					
Type	Constant mesh, spur type, planetary				
Range	Ratio#	Range	Ratio#	Drop box	1.00:1
First	4.00:1	Fifth	1.00:1		
Second	2.68:1	Sixth	0.67:1		
Third	2.01:1	Reverse 1	5.15:1		
Fourth	1.35:1	Reverse 2	3.46:1		#Gear ratio does not include torque converter ratio.
Power takeoff provision					
Engine-driven PTO					
Top mounting pad (optional)(SAE 8-bolt)					
Location	12 O' Clock position (as viewed from rear)				
Drive gear rating	Intermittent - 200 hp(149 kw); Continuous - 125 hp (93 kw)				
Drive gear ratio	1.21 x engine speed				
Side mounting pad (SAE-8-bolt)					
Location	4 O' Clock position (as viewed from rear)				
Drive gear rating	Intermittent - 200 hp (149 kw); Continuous - 125 hp (93 kw)				
Drive gear ratio	1.00 x engine speed				
Hydraulic retarder (optional)					
Type	Coupling type rotor between fixed stators				
Capacity	600 hp (447 kw), 1500 lb ft (2034 Nm) @ 2100 rpm rotor speed				
Size (typical configuration)					
	Straight Through		Drop Box		
Length	54.3 in (1380 mm) (max)		57.5 in (1466 mm) (max)		
Width	30.0 in (762 mm) (max)		30.0 in (762 mm) (max)		
Height with filter	35.5 in (902 mm) (max)		44.9 in (1140 mm) (max)		
Weight, basic model, dry	2200 lb (998 kg)		2750 lb (1249 kg)		
Retarder	Add 165 lb (75 kg) to weight				

+ Rating may vary by vocation, consult AVTEC Marketing department for specific information. * M: Mobile, S: Stationary.

Design Features & Benefits

- Designed for use with diesel engines upto 550 nhp (410 kW). Six forward ranges and a choice of two reverse ratios. This transmission is typically used in on/off-and-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 S/M 5610 transmission to a wide variety of engines.
- Neutral & reverse signals available
- Output drives available in three locations on the drop box. Optional disconnects may be used at any of the output drive locations.
- 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 and agricultural tractors.
- An optional parking brake (Bendix 12 x 5) is available.

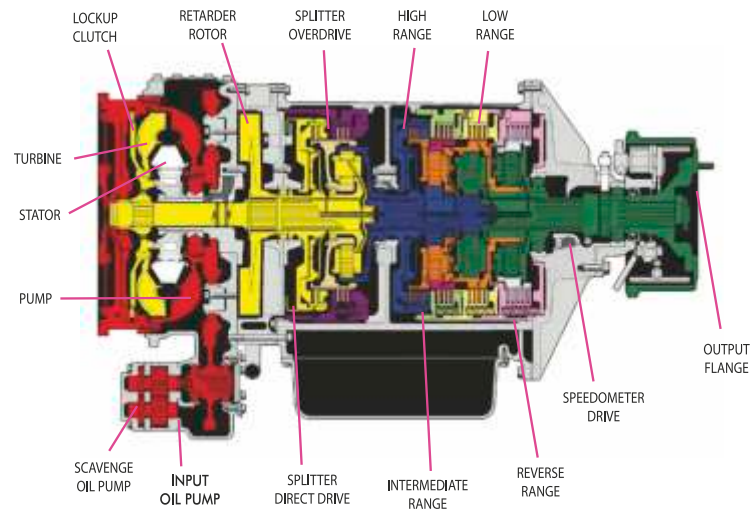
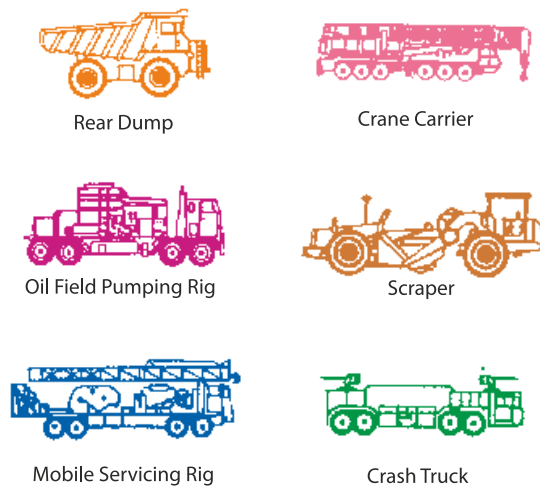
- Two configurations of main circuit oil filters are available with the transmission. The direct mount configuration is a dual filter assembly which mounts directly to the top of the transmission main case. The remote mount configuration is a single element filter which can be mounted wherever convenient.
- A selection of optional driveline flanges is available.
- A speedometer drive is supplied with the transmission. The transmission output speed ratio is 5:1 for straight through models and 1:1 for drop box models.
- Electronic speedometer, 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.

Applications



M/S 5610 Transmission Cross Section