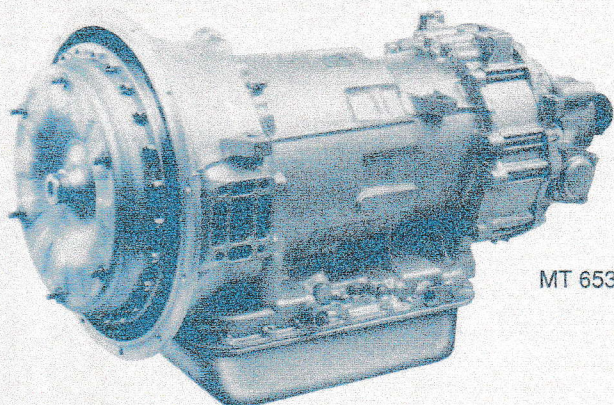


# Allison Transmissions

## Automatic Models MT/MTB 653DR up to 250 nhp (186 kW)



MT 653DR

### Specifications

#### MT/MTB 653DR

#### General rating+

Net input power . . . . .	250 nhp (186 kW)
Input speed range . . . . .	2200 - 4000 rpm, 2200 - 3000 rpm w/retarder
Net input torque (max) . . . . .	640 lb ft (867 N·m)
Vehicle weight (GVW or GCW) . . . . .	Up to 73,280 lbs (33,240 kg)

#### Mounting

Direct . . . . .	SAE 2 flywheel housing with flex plate drive
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#### Torque converter

Type . . . . .	Single-stage, 3-element multiphase
Stall torque ratio . . . . .	TC 350-3.04; TC 360-2.86; TC 370-2.40; TC 378-2.27; TC 380-1.82
Lockup clutch, automatic . . . . .	Effective in 4th & 5th

#### Gearing

Type . . . . .	Constant mesh, spur type, planetary
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#### Range

	Ratios*
First . . . . .	8.05:1 (manually selected)
Second . . . . .	3.58:1
Third . . . . .	2.09:1
Fourth . . . . .	1.39:1
Fifth . . . . .	1.00:1
Reverse . . . . .	5.67:1

\*Gear ratio does not include torque converter ratio.

#### Power takeoff provision

Converter driven (SAE 6-bolt)	
Location . . . . .	Right side (viewed from rear)
Drive gear ratio . . . . .	All ranges--1.00 x turbine speed
Drive gear rating . . . . .	300 lb ft (407 N·m)

#### Oil system

Oil Type . . . . .	Dexron II®, C 4
Capacity (excluding external circuit) . . . . .	18 US qts (17 liters) (w/std. oil pan)
Filter . . . . .	Full flow, replaceable element, remote mounted
Cooler . . . . .	Remote mounted

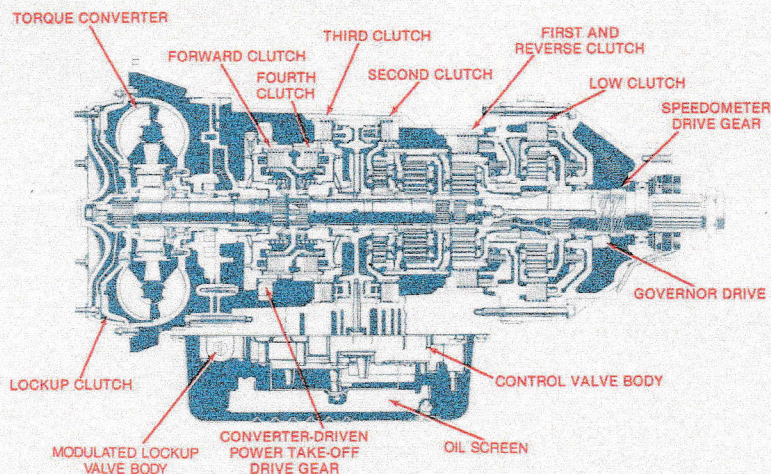
(Filter & cooler not furnished on transmission assembly but are supplied by vehicle manufacturer.)

#### Size

Length . . . . .	36.2 in (920 mm)
Width . . . . .	19.3 in (489 mm)
Height (with 5.1" pan) . . . . .	22.4 in (568 mm)
Weight (dry) . . . . .	602 lbs (273 kg)
Weight (dry) w/output retarder . . . . .	730 lbs (331 kg)

+Vocational ratings may vary by vocation. Consult Allison Transmission Sales for specific information.

## Transmission Cross-section

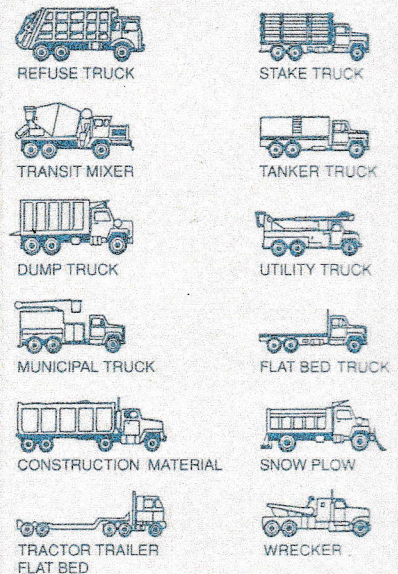


### MT 653DR

#### Design Features & Benefits

- Designed for use with large bore gasoline and mid-range diesel engines up to 250 nhp (186 kW). Five forward ranges and one reverse, with fully-automatic shifting in the upper four ranges. First range is manually selected. This transmission model is best suited for on- and on/off-highway applications.
- Clutches are multidisc design, oil-cooled, hydraulically-operated, and self-compensating for normal wear. Spur-type planetary gears are designed for strength, quietness, and long life.
- Automatic lockup clutch, throttle-modulated for maximized fuel economy and enhanced engine braking. Automatic upshifting and downshifting within each drive range. Built-in inhibitors prevent downshifts or shifts into reverse unless vehicle speed is within an acceptable range.
- The Allison three-element torque converter provides smooth, shock-free operation. A choice of converters permits matching the MT/MTB 653 to a wide variety of engines.
- Converter-driven power take-off drive on right side of transmission (as viewed from rear) is standard. Design is SAE 6-bolt.
- Optional output retarder, with power absorption capacity of over 500 hp (373 kW) at 2000 RPM and "high capacity" calibration, is particularly well suited for start/stop duty cycles; applies braking force directly to driveshaft, reducing vehicle brake use and wear.
- Provisions for neutral start switch, reverse signal switch, SAE regular-duty thread-type speedometer drive, and parking brake.
- 5.1 inch oil pan is standard. Optional 4.3 and 7.1 inch pans are available when ground clearance or heavy duty operation dictates their use.

#### Typical Applications\*



\* Other applications are available. Consult your local distributor for details.

#### SCAAN Specification Assistance.

To be sure that you get the most efficient engine/transmission package for your operation, in your territory, with your preferred vehicle, your local Allison Transmission Division distributor offers **SCAAN**.

**SCAAN** stands for System for Computerized Application Analysis and helps take the guesswork out of vehicle-buying decisions. What's more, it does so quickly and accurately through computer terminals located at all distributor outlets. This means rapid analysis of your vehicle needs on the spot.

**SCAAN** can compute a wide variety of vehicle performance parameters: including gradeability, acceleration and retardation. **SCAAN** will also check your powertrain specifications against Allison Transmission vocational experience to insure satisfactory vehicle performance.

**SCAAN** is user friendly. Interactive operation allows alternate vehicle configurations to be quickly evaluated to insure optimized powertrain selection.



### Allison Transmission

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