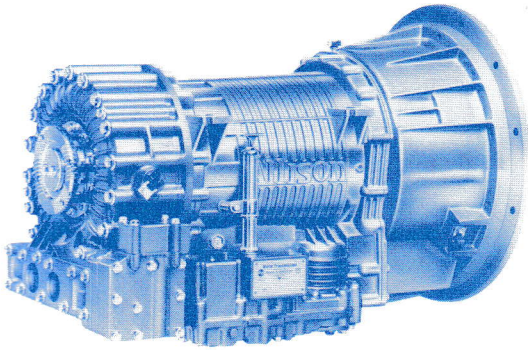


Allison World Transmission

Automatic Models B 400/B 400R up to 295 ghp (220 kW) for bus applications



B 400R

Specifications

B 400R

General rating

Gross input power (maximum)	295 hp (220 kW)
Gross input torque (maximum)	910 lb ft (1230 N•m)
Rated input speed (minimum-maximum)	2000-2800 rpm

Mounting

Engine	SAE 2 flywheel housing, flex disk drive
Chassis	Rear support required

Torque converter

Type	One stage, three element, polyphase
Stall torque ratio	TC 411-2.8; TC 413-2.4; TC 415-2.4; TC 417-2.2; TC 418-2.0; TC 419-2.0; TC 421-1.8
Lockup clutch with torsional damper	Integral/standard (available all ranges)

Gearing

Type	Patented, constant mesh, helical, planetary
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Range	Ratios*
First	3.49:1
Second	1.86:1
Third	1.41:1
Fourth	1.00:1
Fifth	0.75:1
Sixth	0.65:1
Reverse	5.03:1

Available in
4, 5, or 6-speed
shift
calibrations.

Ratio coverage

Forward (5 speed)	4.65:1
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*Gear ratios do not include torque converter multiplication.

Engine-driven power takeoff provision – left or right side – optional

Optional power takeoff units, multiple ratio/ratings	constant-drive or clutched-drive
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Oil system

Oil type	DEXRON®-II
Capacity (excluding external circuits)	26 US qts (25 liters)
Filters – main & cooler	Replaceable element, integral
Heat exchanger type	Oil to water, direct-mount or remote-mount available

Size

	B 400R without PTO drive	B 400PR with PTO drive
Length (FW housing to output flange face)	29.7 in (754 mm)	33.9 in (861 mm)
Depth (centerline to lowest point)	11.0 in (279 mm)	11.0 in (279 mm)
Weight (dry)**	640 lbs (291 kg)	680 lbs (309 kg)

**Weight includes output flange/yoke and engine adaptation.



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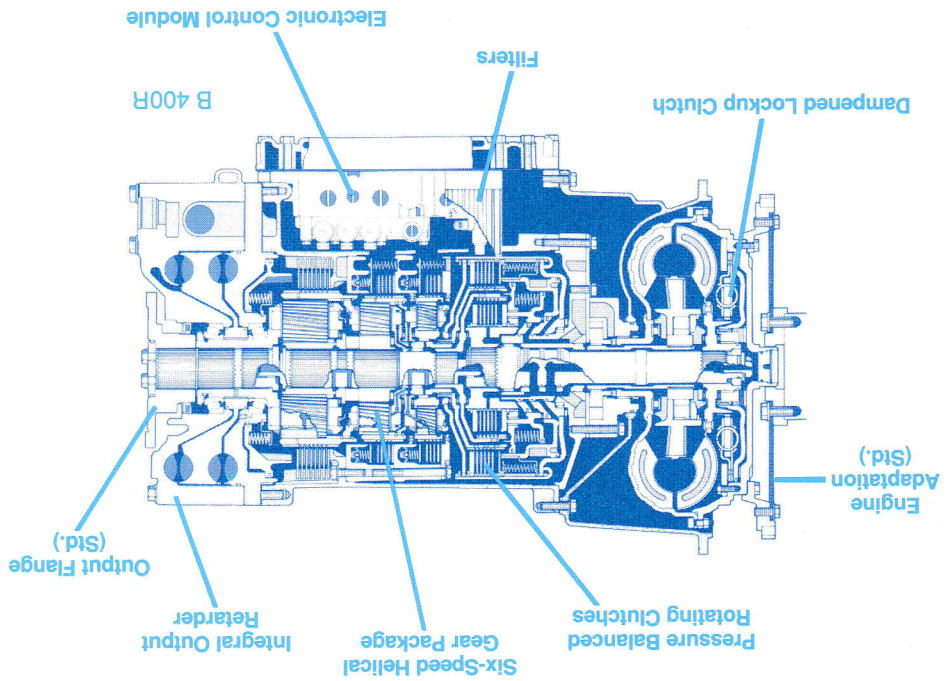
Design Features

- The WT Bus Series incorporates the latest technology in design and manufacturing techniques.
- Hydraulic torque converter with lock-up clutch and integral torsional vibration damper, planetary gear package, and oil pump on one concentric axis.
- Unique patented helical gear arrangement provides 4, 5, or 6-speeds in a compact package.
- The electronic control system is standard equipment. This includes a special bus pushbutton selector and wiring harness.
- Integral externally accessible cartridge type oil filters simplify maintenance.
- Pressure balanced rotating clutches provide quick, smooth shifts to the Adaptive controls tailor shifts to the driving conditions.
- The basic B 400R includes as standard:
 - Integral retarder

- Remote oil cooler
- Output flange/yoke
- Engine adaptation
- Shallow sump for ground clearance
- Oil level sensor
- Two year bus warranty
- Secondary shift schedule
- Small "foot print" pushbutton selector
- Throttle position sensor (TPS)
- Wiring harness
- Vehicle interface module (VIM)

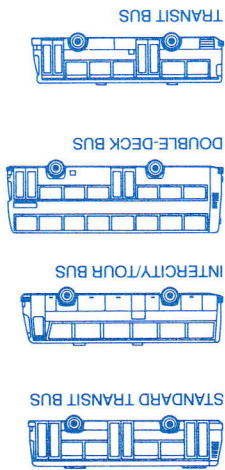
Certain features listed above can be handled as delete options. The following add options are available direct from Allison and also carry the full WT transmission warranty: #1 to #2 flywheel housing adapter standard (B 400)

- Parking brake (not available with the retarder)
- Power takeoff provision
- Power takeoff units
- Integral oil cooler



Transmission Cross-section

Typical Applications



*Areas of the world may differ in approved models

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 distributor offers SCAAN (System for Computerized Application Analysis) to help take the guesswork out of vehicle-buying specification decisions. SCAAN can compute a wide variety of vehicle performance parameters; and will also check your powertrain specifications against Allison Transmission vocational experience to optimize vehicle performance.