

# PennTex Alternator Application Guide for Bus OEM

## 2009-2010 Chevrolet

<u>ENGINE</u>	<u>CHASSIS</u>	<u>PENNTEX ALT. KIT</u>	<u>NOTES</u>
6.0L gas	GMT-610 cutaway chassis (C3500) (Express & Savana)	<b>*PX-422V-2, 4, or 10</b> Rated at 220 amps max. output with 110 amps idle output at most low engine idles.	*Drop in fit in the single OEM alternator location **PX-422V-2 & 4 are used for special output post clock positioning to allow for special clearance needs when the alternator is relocated to a secondary A/C compressor bracket.
6.6L diesel	GMT-610 cutaway chassis (C3500) (Express & Savana)	<b>*PX-422V-10 or **PX-422V-2</b> Rated at 220 amps max. output with 110 amps idle output at most low engine idles.	*Drop in fit in the single OEM alternator location **PX-422V-2 is used for a special 2:00 output post clocking to allow for special clearance needs when the alternator is relocated to a secondary A/C compressor bracket.
6.6L diesel	GMT-540 and 560 chassis (C4500 - 5500)	<b>PX-422V-10</b> Rated at 220 amps max. output with 110 amps idle output at most low engine idles.	Will mount in <b>both</b> OEM alternator locations.
8.1L gas	GMT-540 & 560 chassis (C4500 - 5500)	<b>PX-422V-10</b> Rated at 220 amps max. output with 110 amps idle output at most low engine idles.	Drop in fit in the OEM alternator location

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## 2009-2010 Ford

<u>ENGINE</u>	<u>CHASSIS</u>	<u>PENNTEx ALT. KIT</u>	<u>NOTES</u>
5.4L gas	E-350-450 E-series chassis	<b>PX-220RC-A</b> Rated at 200 amps max. output with 90 amps idle output at most low engine idles.	Used with vehicle chassis that have dual A/C compressors. (Max-A/C system) The second A/C compressor bracket is also the mounting location for the alternator.
5.4L gas	E-350-450 E-series chassis	<b>PX-220RC-T</b> Rated at 200 amps max. output with 90 amps idle output at most low engine idles.	Used with vehicle chassis that use only the OEM A/C compressor. (Tie-In System) The alternator mounting holes are 8mm and it will mount in the OEM alternator location.
6.0L Diesel	E-350/450 E-series chassis	<b>PX-520TDM-6, 6C or 12</b> Rated at 230 amps max. output with 130 amps idle output at most low engine idles.	Fits in OEM alternator location with the use of a <b>support bracket and belt change</b> . Please contact PennTex with specific chassis info regarding this application and A/C configuration.
6.0L Diesel	E-350/450 E-series chassis	<b>PX-525TDM-6, 6C or 12</b> Rated at 250 amps max. output with 125 amps idle output at most low engine idles.	Fits in OEM alternator location with the use of a <b>support bracket and belt change</b> . Please contact PennTex with specific chassis info regarding this application and A/C configuration.
6.8L v10 gas	E-350/450 E-series chassis	<b>PX-520RDC</b> Rated at 230 amps max. output with 130 amps idle output at most low engine idles.	Used with vehicle chassis that have dual A/C compressors. (Max-A/C system) The second A/C compressor bracket is also the mounting location for the alternator.
6.8L v10 gas	E-350/450 E-series chassis	<b>PX-525RDC</b> Rated at 250 amps max. output with 125 amps idle output at most low engine idles.	Used with vehicle chassis that have dual A/C compressors. (Max-A/C system) The second A/C compressor bracket is also the mounting location for the alternator.
6.8L v10 gas	E-350/450 E-series chassis With Tie-in A/C Systems (single OEM Compressor)	<b>PX-520RDC or PX-525RDC</b> Rated at 230 amps max. output with 130 amps idle output at most low engine idles.	For use on a vehicle chassis that will only have a single OEM A/C compressor and a tied-in rear condenser, the PX-2517-09 support bracket and belt kit must be utilized.



## Application Guide for Alternator Kits

Sales Technical Support  
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### CATERPILLAR

Engine	Chassis	Years	PennTex Part #	Notes
3126 (C-7)	Freightliner FB-65 / FS-65	2001 - and up	PX-627SF or PX-627Q	J180 mount style or Quad Pad Mount. Replaces L/N 270 amp.
C12 / C13	Transit Bus and Motorcoach	2006 - and up	PX-833****	Upgrade air-cooled replacement for the belt-driven oil-cooled 50-DN.
****PX-833 series is a 28-volt, 330-amp air-cooled upgrade replacement for the oil-cooled 50-DN.				

### CHEVROLET / GMC

Engine	Chassis	Years	PennTex Part #	Notes
5.3L Gas	Cadillac Escalade Limo	2002 - and up	PX-422V-10	Harness connection modification may be necessary on 2002 model.
5700 Vortec	G-Van Shuttle Bus	1997-98 (some 96)	PX-421V superceded to PX-422V-10	Harness modification necessary (Early 1996 models may require 96-inch belt).
5.7L Gas	Express & Savanna Vans	1999 - 2002	PX-420G-5	Uses PX-1128 K6 pulley.
6.0L Gas	Cadillac Escalade Limo	2003 - and up	PX-422V-10	Drop in fit in the OEM alternator location.
6.0L Gas	H-2 Humvee Limo	2003 - and up	PX-422V-10	Drop in fit in the OEM alternator location.
6.0L Gas	Suburban Limo	2003 - and up	PX-422V-10	Drop in fit in the OEM alternator location.
6.0L Gas (C3500 chassis)	Express & Savanna Vans	2003 - and up	PX-422V-10* or PX-422V-2/4**	Drop in fit in the OEM alternator location. (See footnotes * and ** below)
6.0L Gas	Tahoe and Yukon	2003 - and up	PX-422V-10	Drop in fit in the OEM alternator location.
6.5L Turbo Diesel	G-Van & Express / Savanna	1997- 02 (some 96)	PX-420G-5	Equipped with PX-1128 K6 pulley, May require a 102.62-inch belt on G-vans.
6.6L Diesel (C4500 chassis)	GMT-540 Shuttle Bus	2006 - and up	PX-422V-10	Drop in fit in the OEM alternator location.
6.6L Diesel (C5500 chassis)	GMT-560 Shuttle Bus	2006 - and up	PX-422V-10	Drop in fit in both OEM alternator locations. (See special note)
<b>Special Note</b> - Earlier 2003 to 2005 C4500 and C5500 chassis with 6.6L diesel engine will require harness connection modification.				
6.6L Diesel (C3500 chassis)	GMT-610 Shuttle Bus	2006 - and up	PX-422V-10* or PX-422V-2/4**	Drop in fit in the OEM alternator location. (See footnotes * and ** below)
7400 Vortec	G-Van & Express / Savanna	1997- 2000 (some 96)	PX-420G-5	Equipped with PX-1128 K6 pulley. Older models may require a 100.62-inch belt.
8.1L Gas (C4500 & C5500)	GMT-540 / 560 Shuttle Bus	2005 - and up	PX-422V-10	Drop in for the OEM alternator location. Earlier years require harness modification.
8.1L Gas	Suburban Limo	2003 - and up	PX-422V-10	Drop in fit in the OEM alternator location.
* PX-422V-10 is the standard OEM 10:00 output post position.				
** PX-422V-2 and PX-422V-4 are used when a special output post clocking is needed to allow for special clearance needs when the alternator is relocated to a secondary A/C compressor bracket.				

### CUMMINS

Engine	Chassis	Years	PennTex Part #	Notes
6BT 5.9 Diesel	Misc. Shuttle & School	1995 - and up	PX-320S, PX-325S, PX-328S***	Fits standard large J180 mount. Use PX-1355 K8 pulley on PX-328S.
*** PX-320S is a 14-volt, 200-amp charging system, PX-325S is a 14-volt, 250-amp charging system, and PX-328S is a 14-volt, 285-amp charging system.				
<b>Special note</b> - several engine manufacturers have upgrade alternator mounting brackets to replace the factory equipped Delco 21si and 22si alternators with the higher output PX-3 series.				
ISB / ISC	Freightliner FB-65	2002 - and up	PX-627SF	Must have large J180 mount bracket. Use PX-1355 K8 pulley.
ISB / ISC	Thomas / Bluebird	Most model years	PX-627S and PX-635S	Fits standard large J180 mount. Use PX-1355 K8 pulley.
ISC / ISL / ISM	Transit Bus and Motorcoach	1998 - and up	PX-833****	Upgrade air-cooled replacement for the belt-driven oil-cooled 50-DN.
**** PX-833 series is a 28-volt, 330-amp air-cooled upgrade replacement for the oil-cooled 50-DN.				

### DETROIT DIESEL

Engine	Chassis	Years	PennTex Part #	Notes
Series 40 / 50 / 60	Thomas / Bluebird	Most model years	PX-627S and PX-635S	Fits standard large J180 mount. Use PX-1355 K8 pulley.
Series 50 / 60	Transit Bus and Motorcoach	Most model years	PX-833****	Upgrade air-cooled replacement for the belt-driven oil-cooled 50-DN.
****PX-833 series is a 28-volt, 330-amp air-cooled upgrade replacement for the oil-cooled 50-DN.				



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### DODGE/CHRYSLER

Engine	Chassis	Years	PennTex Part #	Notes
360 Gas	Ram Van	1995-2003	PX-220P2D-5	Equipped with PX-1155 K7 pulley. Bracket kit PX-3600 required.
5.9L Diesel	Ram Pick-up Truck	Various years	PX-421-SMD	Equipped with PX-1155 K7 pulley. Must use PX-1199 Field Wire Resistor Kit.

### FORD

Engine	Chassis	Years	PennTex Part #	Notes
4.6L Gas	Ford Police / Lincoln Limo	1996 - 2002	PX-220RL-5T	Equipped with PX-1353 K6 pulley and PX-1335 rear support bracket.
4.6L Gas	E-250 series	Late 2001 - 2008	PX-220R-5T	For single OEM A/C compressor and a tied in rear condenser. (Tie-in Systems)
5.4L v8 Gas	E-350 / 450 series	1997 - late 2001	PX-220R-5 or PX-220R-5T	Equipped with PX-1130 K8 pulley and PX-1258T rear support bracket.
5.4L v8 Gas	E-350 / 450 series	Late 2001 - 2008	PX-220R-5A (7/16" bolt holes)	Used with dual A/C compressors & mount bracket (Max-A/C sys.)-K6 pulley.
5.4L v8 Gas	E-350 / 450 series	2009 - 2010	PX-220RC-A (7/16" bolt holes)	Used with dual A/C compressors & mount bracket (Max-A/C sys.)-K6 pulley.
5.4L v8 Gas	E-350 / 450 series	Late 2001 - 2008	PX-220R-5T (8mm bolt holes)	Used w/single OEM A/C comp (Tie-in Syst.) - K6 pulley & PX-1258T rear brace.
5.4L v8 Gas	E-350 / 450 series	2009 - 2010	PX-220RC-T (8mm bolt holes)	Used w/single OEM A/C comp (Tie-in Syst.) - K6 pulley & PX-1258T rear brace.
5.4L v8 Gas	F-250 / 350 series	1998 - 2006	PX-220R-5T	1998-01 use PX-1130 K8 pulley - 2002-06 uses PX-1129 K6 pulley.
5.4L v8 Gas	F-250 / 350 series	2007 - 2010	PX-220RM-5T (8mm bolt holes)	Works with PCM monitored system. Equipped with PX-1129 K6 pulley.
6.0L Diesel	E-350 / 450 series	2004 - 2010 * (1)	PX-520TD6 and PX-525TD6	<b>Must use with BSI</b> alternator support bracket & belt kit #A1-0052 for Max-A/C sys.
6.0L Diesel	E-350 / 450 series	2004 - 2010 * (2)	PX-520TD6C and PX-525TD6C	<b>Must use with Carrier</b> bracket & belt kit <b>PX-5806</b> for single A/C comp.& Tie-in sys.
6.0L Diesel	E-350 / 450 series	2004 - 2010 * (3)	PX-520TD12 and PX-525TD12	<b>Must use with Carrier</b> bracket & belt kit #72-62035-02 for Max- A/C system.
6.0L Diesel	F-250 / 550 series	2003 - 2010 * (4)	PX-220TF-6.0L	F- series diesel truck chassis only.

**\* 2009 Application note:** 2009 6.0L diesel applications require a PCM monitored style charging system. See part numbers referenced below or contact PennTex for additional application assistance.

**(1)** PX-520TDM6, PX-525TDM6 **(2)** PX-520TDM6C, PX-525TDM6C **(3)** PX-520TDM12, PX-525TDM12 **(4)** PX-220TFM-6.0L

6.8L v10 Gas	E-350 / 450 series	1997 - 2001	PX-520RD and PX-525RD	Equip. w/ PX-1130 K8 pulley. Special mounting bracketry required. (See footnote **)
6.8L v10 Gas	E-350 / 450 series	2002 - 2008	PX-520RD and PX-525RD	Equip. w/ PX-1129 K6 pulley. Special mounting bracketry required. (See footnote **)
6.8L v10 Gas	E-350 / 450 series	2009 - 2010	PX-520RDC and PX-525RDC	Equip. w/ PX-1129 K6 pulley. Special mounting bracketry required. (See footnote **)

**\*\*** For Max-A/C system chassis (two A/C compressors), the PX-5RD series usually mounts onto the second A/C compressor bracketry.

**\*\*** For single A/C compressor chassis-use the following bracket kits: (1997-01) use **PX-2517-3** - (2002-07) use **PX-2517-4** - (2008) use **PX-2517-08** - (2009-2010) use **PX-2517-09**.

6.8L v10 Gas	E-350 / 450 series	2002 - 2008	PX-220R-5 or PX-220R-5T	Only used when support bracketry for PX-5RD series is not available.
6.8L v10 Gas	E-350 / 450 series	2009 - 2010	PX-220RC-T	Only used when support bracketry for PX-5RD series is not available.
6.8L v10 Gas	F-250 / 550 series	1998 - 2006	PX-220R-5 or PX-220R-5T	1998-01 uses PX-1130 K8 pulley - 2002-06 uses PX-1129 K6 pulley.
6.8L v10 Gas	F-250 / 550 series	2007 - 2010	PX-220RM-5 or PX-220RM-5T	Works with PCM monitored system. Equipped with PX-1129 K6 pulley.
7.3L Diesel	E-350 series	1988 - Feb. 1992	PX-220P-5	<b>Needs a special double groove pulley</b> - 3-5/16"OD x 1/2" x 3/8" grooves.
7.3L Diesel	E-350 series	Mar. 1992 - 1994	PX-220T-5	1992 uses a K6 or K7 pulley; 93-94 uses a K8 pulley.
7.3L Diesel	E-350 / 450 series	1995 - 2003	PX-520TD / PX-627T/ PX-635T	The PX-5T uses PX-1130 K8 pulley; the PX-6T uses PX-1238 K8 pulley.
7.3L Diesel	F-250 / 450 series	1995 - 2003	PX-220TF or PX-520TFD	Equipped with PX-1130 K8 pulley.
7.5L 460 Gas	E-350 series	1988 - 1996	PX-220P-5	Equipped with PX-1129 K6 pulley. May require modifications to OEM bracket.
7.5L 460 Gas	E-350 series	1994 - 1996	PX-520PD	Equipped with PX-1129 K6 pulley. May require modifications to OEM bracket.



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## Application Guide for Alternator Kits

### FREIGHTLINER

Engine	Chassis	Years	PennTex Part #	Notes
Caterpillar 3126 (C7)	FB-65, MB-45, MB-55	2001 - and up	PX-627SF or PX-627Q	J180 mount style or Quad Pad Mount. Replaces L/N 270 amp.
Cummins ISB / ISC	FB-65, MB-45, MB-55	2001 - and up	PX-627Q and PX-635Q	Quad pad mount for Cummins.
Mercedes 6.4L	FB-65, MB-45, MB-55	2001 - and up	PX-627SF	J180 mount style. Replaces L/N 270 amp.

### INTERNATIONAL/NAVISTAR

Engine	Chassis	Years	PennTex Part #	Notes
T444E	3400, 3000RE, 3800	1994 - 2002	PX-320S, PX-325S, PX-328S*	Fits standard large J180 mount. Use PX-1355 K8 pulley. (See footnote*)
T444E	3400 / 3800	1995 - 2002	PX-627S and PX-635S	Fits standard large J180 mount. Use PX-1355 K8 pulley.
DT466	International / Bluebird	Most model years	PX-627S and PX-635S	Fits standard large J180 mount. Use PX-1355 K8 pulley.
7.6L Maxx-force D7	IC School Bus - RE300	2008 - and up	PX-627Q and PX-635Q	Fits standard large quad pad mount. Use PX-1355 K8 pulley.
T444E, DT-466, VT-365	3200, 3400, 3800 chassis	2003 - and up	PX-627S and PX-635S	Fits standard large J180 mount. Use PX-1355 K8 pulley.
Misc. Eng. w/Delco 21 / 22si	Misc. chassis	Most model years	PX-421JM**	Delco 21si and 22si replacement. Use PX-1131 K8 pulley on Cummins engine.
Misc. Eng. w/Delco pad mnt.	Misc. chassis	2003 - and up	PX-421PM**	Delco pad mount replacement. Use PA-4020 K8 pulley. (See footnote*)

\* PX-320S is a 14-volt, 200-amp charging system, PX-325S is a 14-volt, 250-amp charging system, and PX-328S is a 14-volt, 285-amp charging system.

\*\* Special note - several engine manufactures have upgrade alternator mounting brackets to replace the factory equipped Delco 21si and 22si alternators with the higher output PX-3 series.

### ISUZU

Engine	Chassis	Years	PennTex Part #	Notes
6.0L Gas (GM)	NPR HD Series	2008 - 2010	PX-422V-10	Drop in fit in the OEM alternator location.

### WORKHORSE CHASSIS

Engine	Chassis	Years	PennTex Part #	Notes
6.5L Diesel	Workhorse Worktruck	2002 - 2004	PX-422V	Harness plug modification may be necessary on some older models.
6.6L Diesel	Workhorse Worktruck	2005 - and up	PX-422V	Drop in fit in the OEM alternator location.
8.1L Gas	Workhorse Worktruck	2002 - 2004	PX-422V	Harness plug modification may be necessary on some older models.
8.1L Gas	Workhorse Worktruck	2005 - and up	PX-422V	Fits in OEM location with plug in harness.
Cummins ISB / ISC	Workhorse Bus Chassis with	2002 - and up	PX-627Q (275A)	Large frame four bolt Pad Mount style for Cummins.
	Quad Pad Mount alternators		PX-635Q (350A)	

For Batteryless 28-volt A/C applications the 140-amp (PX-614S) is available.

For normal 28-volt applications the 175-amp PX-317 series, 160-amp PX-616 series, and 190-amp PX-619 series alternators are also available.