



Updated 2/7/14

## TC-INST

# ALBINS TORQUE CONVERTER PACKAGE

### GENERAL NOTES

This package contains all of the major components required to install an Albins torque converter in a vehicle with an AGB transaxle. The torque converter, flex plate, and pump body assembly replace your clutch, flywheel, and hydraulic slave cylinder. An integral pump circulates the torque converter fluid, which provides a compact overall package and eliminates the need for a separate, belt-driven pump.

The “complete” converter package includes a purpose built oil tank, filter, heat exchanger, air to oil cooler, fan, thermostitch, and various fittings needed to complete the system. These components provide the required cooling performance and reservoir capacity to keep the Albins torque converter alive and healthy, even in the most adverse of conditions. For a breakdown of specific cooling system components, see the plumbing diagram on the following page.

### RETROFITTING AN EXISTING TRANSAXLE

1. If your AGB main case was manufactured prior to February 2008, it will have to be modified to accept the Albins torque converter package. Weddle Industries can perform the required modifications, but the transaxle will have to be completely disassembled to do the necessary machine work.
2. A spacer plate will need to be installed between the bell housing and the engine. The thickness of this spacer varies by engine type, but for most applications it will be about 35-50mm (1.375-1.970”) thick. The engine or transmission may have to be moved to provide this extra space.
3. A new input shaft will need to be installed. This requires special tools and some knowledge of transaxle repair. We recommend that a qualified AGB service center handle the job.

### ASSEMBLY TIPS

1. There is a white Teflon sealing ring that must fit snugly into a groove on the input shaft. A special tool (TC-TOOL) is required for proper installation of this sealing ring.
2. Be careful not to damage the sealing ring when sliding the pump/stator support assembly over the input shaft. Also, make sure to screw the three oil outlet tubes into the pump assembly before tightening the M8 bolts that secure the assembly to the main case. Otherwise, you might have a hard time getting the fittings to line up with the threaded holes.

3. When placing the torque converter on the stator support, make sure that the pump drive fingers engage in the pump gear, and that the converter is fully seated. Once seated, the torque converter must not be disturbed. Depending on how the transaxle is tilted during installation, it may be necessary to restrain the torque converter to stop it from moving.

4. When mating the transaxle up to the engine, make sure the dowels are aligned correctly. Do not force the engine and transaxle together by tightening the bolts. If something is hanging up, take the transaxle back out and re-check the assembly.

5. With the engine and transaxle bolted together, you will need to check the “pull up” of the torque converter. Before you bolt up the converter, slide it away from the flex plate as far as possible. There should be a 2-4mm (.080-.160”) gap between the mating surface of the converter and the flex plate.

### COOLING SYSTEM TIPS

1. Locate the air to oil cooler so that it receives sufficient air flow. Also, make sure the cooler is oriented such that the converter fluid has to fill the entire cooler before it can exit.
2. The oil reservoir tank should be installed higher than or level with the pump. This will ensure that the system primes easily.

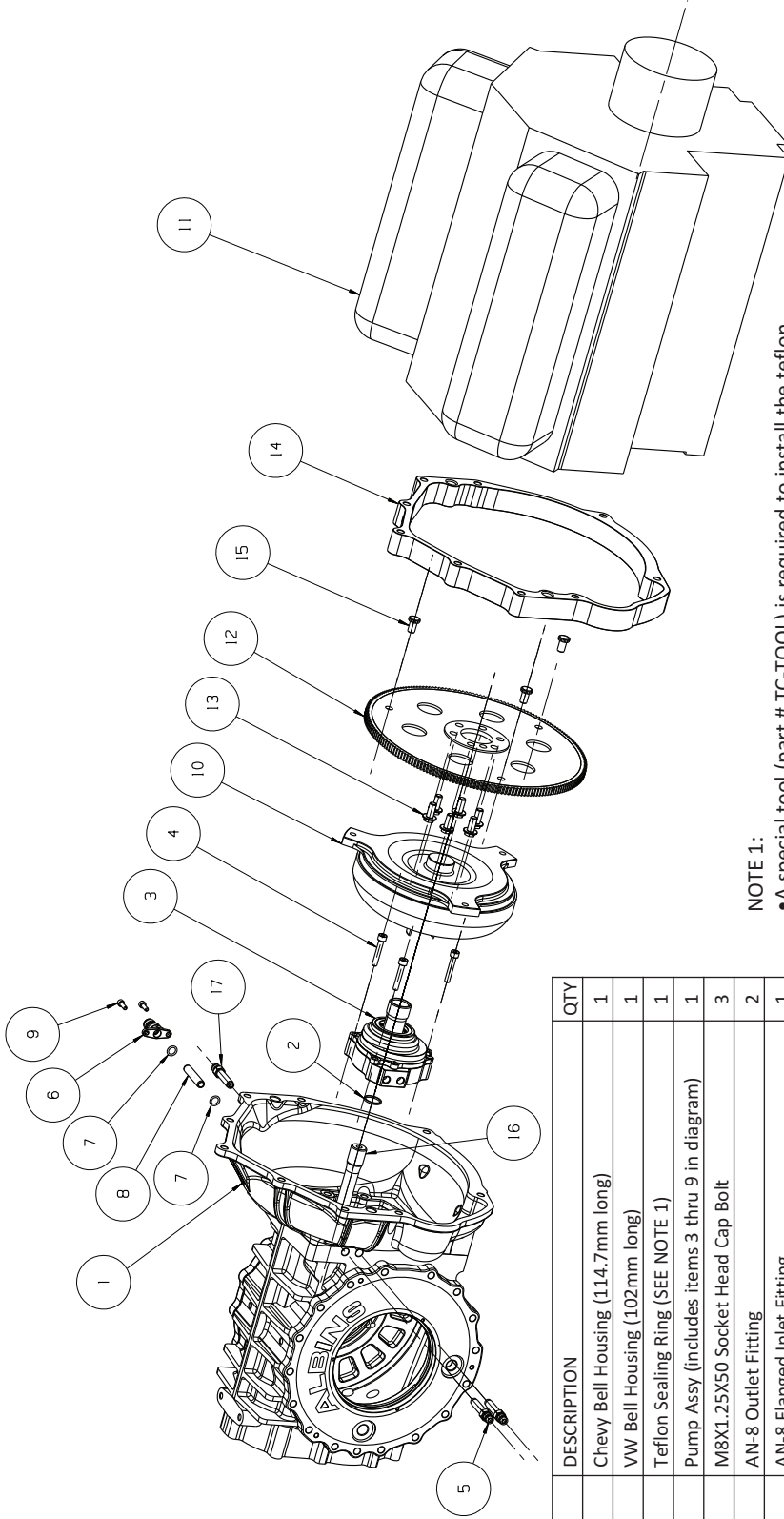
### TEST THE ASSEMBLY

1. To test the completed system, first rotate the engine and transmission by hand through a full revolution to ensure that they are free. Fill the tank with SWEPCO 714 ATF (Weddle 9-SW714) and start the engine. It may take some time for the pump to prime initially. The fluid level will drop substantially as the torque converter is filled. Refill the oil as necessary to approximately 75% of the tank capacity. If possible, monitor the return flow into the tank to verify that the fluid is circulating. Confirm that the torque converter is coupling and transmitting drive through to the gearbox. Finally, switch off the engine and check for leaks.

2. The pressure relief valve should be adjusted to 55 PSI with the engine running at 4500 RPM in neutral and the fluids warm. There is a threaded port (1/8” NPT) in the relief valve body that will accept a hydraulic pressure gauge. Once the relief valve is adjusted, the pressure gauge can be removed and the hole plugged again.



# ALBINS TORQUE CONVERTER ASSEMBLY



**NOTE 1:**

• A special tool (part # TC-TOOL) is required to install the teflon sealing ring on the input shaft.

**NOTE 2:**

• Torque converter packages for Ford, Toyota, Nissan, BMW, and others are available by special order. Stall speeds can be adjusted to suit customer requirements.

**NOTE 3:**

• Required spacer thickness between bell housing and engine block:  
 Chevy bell housing to LS engine = 36.3mm  
 Chevy bell hsg to Chevy 2pc rear main engine = 44.0mm  
 VW bell housing to LS engine = 49.0mm

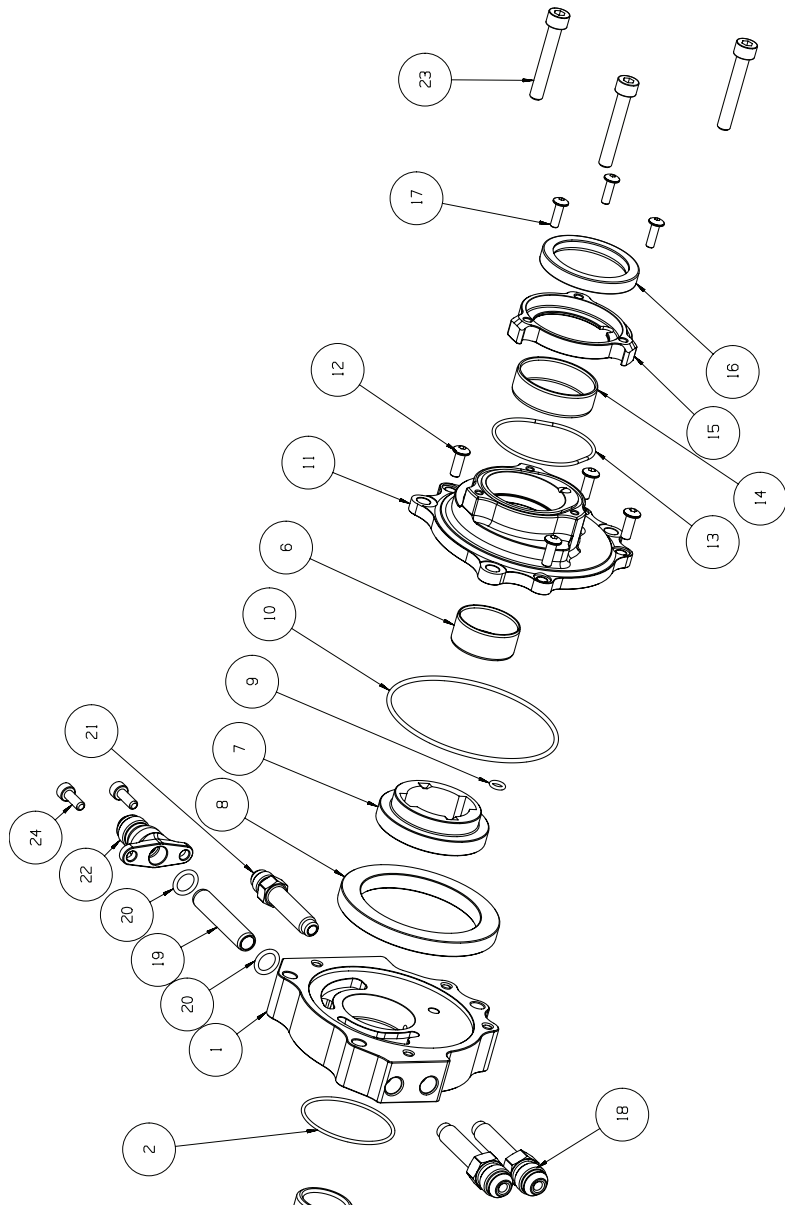
ITEM	PART NO.	DESCRIPTION	QTY
1	AGB.101B	Chevy Bell Housing (114.7mm long)	1
(1)	AGB.101A	VW Bell Housing (102mm long)	1
2	TC.6848	Teflon Sealing Ring (SEE NOTE 1)	1
3	TC.5534	Pump Assy (includes items 3 thru 9 in diagram)	1
4	H-BM8X50SH	M8X1.25X50 Socket Head Cap Bolt	3
5	TC.5528	AN-8 Outlet Fitting	2
6	TC.6862	AN-8 Flanged Inlet Fitting	1
7	TC.6870	M12x2.5 Viton O-Ring	2
8	TC.6869	Inlet Tube	1
9	H-BM6X16SH	M6x1x16 Socket Head Cap Bolt, Stainless	2
10	TC-CONV	Torque Converter for Chevy Bell Hsg	1
(10)	TC-CONV-VW	Torque Converter for VW Bell Hsg	1
11	SEE NOTE 2	Engine (SEE NOTE 2)	1
12	TC-FLEX-LS-CHEV	Flex Plate, LS1/LS2/LS7 with Chevy Bell Hsg	1
(12)	TC-FLEX-LS-VW	Flex Plate, LS1/LS2/LS7 with VW Bell Hsg	1
(12)	SEE NOTE 2	Flex Plate, Other (SEE NOTE 2)	1
13	H-BM11X22XHD	M11x1.5x22 Flex Plate Bolt (for Chevy LS Engine)	6
14	CL-SPACER-C363	Chevy Bell Hsg to LS Engine Spacer Plate (36.3mm)	1
(14)	SEE NOTE 3	Spacer Plate, Other (SEE NOTE 3)	1
15	H-B71620725XHD	7/16-20 x .725" Converter Bolt (for TC-CONV)	3
(15)	H-B71620500XHD	7/16-20 x .500" Converter Bolt (for TC-CONV-VW)	3
16	TC.5550	Input Shaft for 1.1.5" AGB with Torque Converter	1
(16)	TC.6401	Input Shaft for 10" AGB with Torque Converter	1
17	TC.10799	AN-6 Outlet Fitting (seal bleed out)	1



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Drawing No: TC-ASSY  
 Drawing Name: TORQUE CONVERTER ASSY  
 Drawn By: J.W. March 12, 2008  
 Revised: C.W. April 25, 2011

# PUMP/STATOR SUPPORT ASSEMBLY FOR ALBINS TORQUE CONVERTER



**NOTE 1:**  
 • A special tool (part # TC-TOOL) is required to install the teflon sealing ring on the input shaft.

ITEM	PART NO.	DESCRIPTION	QTY
1	TC.5516	Main Plumbing Block for Pump Assy	1
2	TC.5526	Viton O-Ring, M54x2.0	1
3	TC.5517	Stator Support	1
4	H-BM6X12FSH	Flat Socket Head Bolt, M6x1x12	3
5	AGB.133	Input Shaft Seal	1
6	TC.5533	Drive Gear Bushing	1
7	TC.5519	Drive Gear	1
8	TC.5520	Driven Gear	1
9	TC.5527	Viton O-Ring, 6.35x1.78mm (1/4" x .070")	1
10	TC.5535	Viton O-Ring, 101.6x2.62mm (4" x .103")	2
11	TC.5518	Pump Housing/Cover	1
12	H-BM6X16BH-S	Button Head Bolt, M6x1x16	4
13	TC.12362	Viton O-Ring, M58x2.0	1
14	TC.5532	Torque Conv Pump Snout Bushing	1
15	TC.11509	Outer Seal Carrier	1
16	TC.5531	Outer Seal, 46x60x8	1
17	H-BM5X16BH-S	Button Head Bolt, M5x0.8x16	3
18	TC.5528	AN-8 Outlet Fitting	2
19	TC.6869	Inlet Tube	1
20	TC.6870	M12x2.5 Viton O-Ring	2
21	TC.10799	AN-6 Outlet Fitting (seal bleed out)	1
22	TC.6862	AN-8 Flanged Inlet Fitting	1
23	H-BM8X50SH	M8X1.25X50 Socket Head Cap Bolt	3
24	H-BM6X16SH-S	M6x1x16 Socket Head Cap Bolt, Stainless	2
25	TC.6848	Teflon Sealing Ring (SEE NOTE 1)	1
26	TC.5550	Input Shaft for 11.5" AGB w/Torque Conv	1
(26)	TC.6401	Input Shaft for 10" AGB w/Torque Conv	1

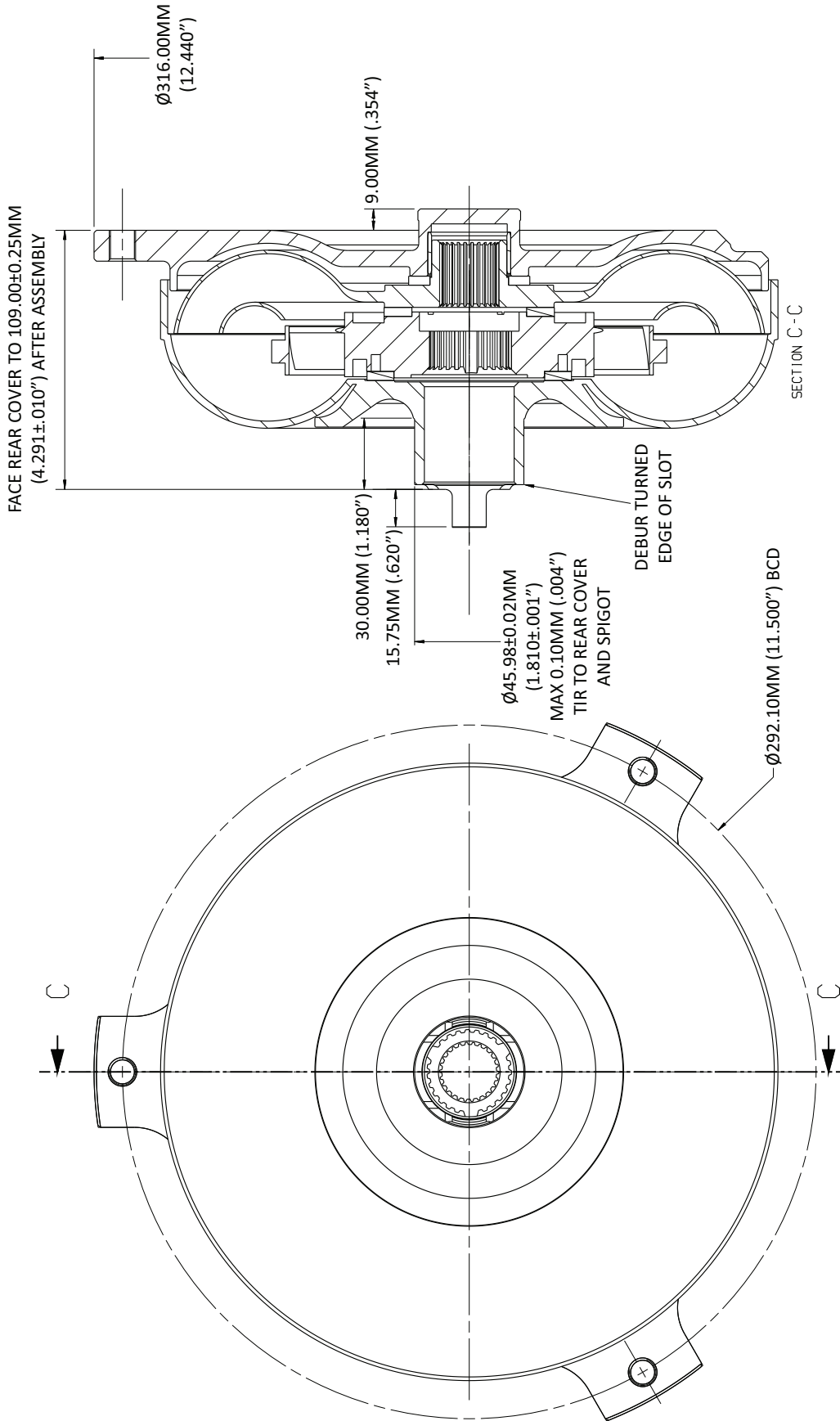


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Drawing No: TC.5534  
 Drawing Name: Torque Conv Pump Assy  
 Drawn By: J.W. October 25, 2010  
 Revised: C.W. April 25, 2011

# ALBINS TORQUE CONVERTER - EXTERNAL DIMENSIONS

## FINAL MACHINING FOR CHEVY STYLE CONVERTER



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Drawing No: TC-CONV-EXTDIM  
Drawing Name: Albins Chev TC Ext Dims  
Drawn By: J.W. March 29, 2010  
Revised: C.W. February 28, 2013