

Updated 01/09/14

Updated 2/7/14

## **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, thermoswitch, 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.

# TC-INST

7200 Hollister Ave, Suite C Goleta, CA 93117 Ph 805-562-8600 • Fax 805-562-8661 info@weddleindustries.com

Drawing No: TC-PLUM

Drawing Name: Torque Conv Plumbing Diagram

Drawn By: RX Revised: 11/8/23

### -8 SIZE LINE Note: Air to Oil Cooler size will vary by Vehicle 10 5 OIL TANK 0 Port for pressure gauge (Adjust to 55 PSI) INSTALL TANK HIGHER THAN OR LEVEL WITH PUMP, TO AID PRIMING -8 SIZE LINE 11 TO INSURE PROPER FUNCTION USE A HOSE DESIGNED TO WITHSTAND SUCTION OR INSTALL AN INNER SUPPORT SPRING ON THE INLET. FOR LINES LONGER THAN 750MM (30.00") USE -10 MINIMUM. 1 6 13 PRESSURE RELIEF OUT (-8) **FILTER** SEAL BLEED OUT (-6) TORQUE CONVERTER OUT (-8) AIR TO OIL COOLER 3 PUMP ASSEMBLY (LOOKING FROM ENGINE TOWARDS TRANSMISSION) WATER IN FROM RADIATOR

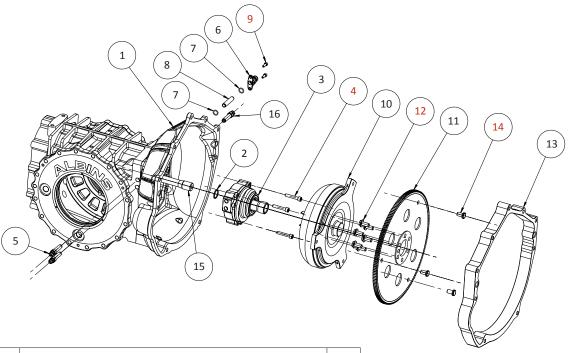
WATER OUT TO ENGINE

PLUMBING DIAGRAM FOR ALBINS TORQUE CONVERTER

WATER TO OIL HEAT EXCHANGER NOTE: AN ADDITIONAL AIR TO OIL COOLER CAN BE USED INSTEAD OF THE WATER TO OIL HEAT EXCHANGER, **DEPENDING ON CUSTOMER PREFERENCE** 

ITEM	PART NO.	DESCRIPTION	QTY
1	9-FILTER1	In-Line Strainer Filter	1
2	TC-HEATEX	Heat Exchanger	1
3	TC-HEATEX-AN8	AN-8 Adapter Fitting	2
4	9-CTC2	Air to Oil Cooler w/Fan 14X6	1
5	9-CTC-TS	Thermoswitch for Cooler Fan	1
6	9-CTC-AN8	AN-8 Adapter Fitting	2
7	H-AN8TEE	AN-8 Tee	1
8	H-AN834	AN-8 X 3/4-16 Fitting, 7/8" Hex	2
9	TC-10986	Pressure Relief Valve	1
10	TC-TANK	Reservoir Tank w/Overflow	1
11	TC-TANK-MB	Tank Mounting Brackets (Pair)	1
12	TC-TANK-BF	Filter for Breather Can	1
13	TC-TANK-BC	Breather Can Assembly	1

### **ALBINS TORQUE CONVERTER ASSEMBLY**



Torque converter packages available for other engines. Custom spacers, flex plates, and bell housings will be required. Please call Weddle Industries for details.

ITEM	PART NO.	DESCRIPTION	QTY
1	AGB-00101-B	Chevy Bell Housing (114.7mm long)	1
(1)	AGB-00101-A	VW Bell Housing (102mm long)	1
2	TC-24460	Teflon Sealing Ring, New Style, Installs in I.D. of Stator Support	1
(2)	TC-06848	Teflon Sealing Ring, Old Style, Installs on Input Shaft	1
3	TC-05534	Pump Assembly (Includes Items 3 through 9 in Diagram)	1
4	H-BM8X50SH	M8X1.25X50 Socket Head Cap Bolt	3
4	TI-DIVIOX303IT	Torque to 18 ft. lb with Loctite 243 (Blue)	,
5	TC-05528	AN-8 Outlet Fitting	2
6	TC-06862	AN8- Flanged Inlet Fitting	1
7	TC-06870	M12X2.5 Viton O-Ring	2
8	TC-06869	Inlet Tube	1
9	H-BM6X16SH	M6X1X16 Socket Head Cap Bolt, Stainless	2
	TI-DIVIOXIOSIT	Torque to 8 ft. lb with Loctite 243 (Blue)	
10	TC-CONV	Torque Converter for Albins Transaxle with Early Input Shaft, Weld Up	1
(10)	TC-CONV-09-TT	9" Bolt Together Converter, Late AGB and All ST6-I	1
(10)	TC-CONV-10-TT	10" Bolt Together Converter, Late AGB and All ST6-I	1
(10)	TC-CONV-VW	Converter for Albins VW Bell Housing, Weld Up with Starter Ring Gear	1
11	TC-FLEX-LS-CHEV	Flex Plate, LS1/LS2/LS7 with Chevy Bell Housing	1
(11)	TC-FLEX-LS-VW	Flex Plate, LS1/LS2/LS7 with VW Bell Housing	1
(11)	TC-FLEX-DV-VW	Flex Plate, Dodge Viper V10 with VW Bell Housing	1
(11)	TC-FLEX-FS-VW	Flex Plate, Ford Small Block with VW Bell Housing	1
(11)	TC-FLEX-NV6-VW	Flex Plate, Nissan VQ35 with VW Bell Housing	1

ITEM	PART NO.	DESCRIPTION	QTY
12	H-BM11X22XHD	M11X1.5X22 Flex Plate Bolt (for Chevy LS Engine) Torque to 95 ft. lb with Loctite 272 (Red)	6
13	CL-SPACER-C363	Chevy Bell Housing to LS Engine Spacer Plate (36.3mm)	1
(13)	CL-SPACER-C440	Chevy Bell Housing to Early Chevy V8 with 2 Piece Rear Main Seal	1
14	H-B71620725XHD	7/16-20X.725" Converter Bolt (for TC-CONV) Torque to 95 ft. lb with Loctite 272 (Red)	3
(14)	H-B71620500XHD	7/16-20X.500" Converter Bolt (for TC-CONV-VW) Torque to 95 ft. lb with Loctite 272 (Red)	3
15	TC-32150	Input Shaft for 11.5" AGB with Torque Converter, New Style, No Seal Groove	1
(15)	TC-05550	Input Shaft for 11.5" AGB with Torque Converter, Old Style, Seal Groove on Shaft	1
(15)	TC-06401	Input Shaft for 10" AGB with Torque Converter	1
16	TC-10799	AN-6 Outlet Fitting (Seal Bleed Out)	1



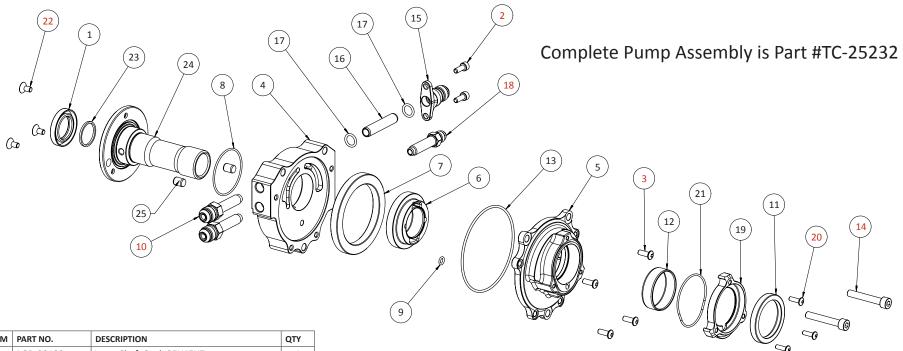
7200 Hollister Ave, Suite C Goleta, CA 93117 Ph 805-562-8600 • Fax 805-562-8661 info@weddleindustries.com Drawing No: TC-ASSY

Drawing Name: TORQUE CONVERTER ASSY

Drawn By: RX

Revised: 5/17/23

## PUMP/STATOR SUPPORT FOR ASSEMBLY FOR ALBINS TORQUE CONVERTER



ITEM	PART NO.	DESCRIPTION	QTY
1	AGB-00133	Input Shaft Seal, 25X45X7mm	1
2	H-BM6X16SH	M6X1X16 Socket Head Cap Bolt	2
	TT BIVIOX103TT	Torque to 8 ft. lb with Loctite 243 (Blue)	
3	H-BM6X16BH	M6X16 Button Head Bolt	4
	TT BIVIOXIOBIT	Torque to 8 ft. lb with Loctite 243 (Blue)	
4	TC-05516	Main Plumbing Block	1
5	TC-05518	Pump Housing Cover	1
6	TC-05519	Pump Drive Gear	1
7	TC-05520	Pump Driven Gear	1
8	TC-05526	O-Ring, Stator Support to Pump Body	1
9	TC-05527	O-Ring, Pump Body to Cover	1
10	TC-05528	Oulet Fitting	2
10	10-05520	Torque to 26 ft. lb with Loctite 243 (Blue)	
11	TC-05531	Outer Pump Seal	1
12	TC-05532	Torque Converter Pump Snout Bush	1
13	TC-05535	O-Ring, Pump Body to Cover	1
14	H-BM8X50SH	M8X1.25X50 Socket Head Cap Bolt	3
14	TT BIVIOX303TT	Torque to 18 ft. lb with Loctite 243 (Blue)	
15	TC-06862	Flanged Inlet Fitting	1
16	TC-06869	Oil Pump Inlet Tube	1
17	TC-06870	O-Ring for Inlet Tube,	2
1/	10 00070	1 in Inlet Fitting, 1 in Pump Body	

ITEM	PART NO.	DESCRIPTION	QTY
18	TC-10799	Outlet Fitting	1
		Torque to 26 ft. lb with Loctite 243 (Blue)	
19	TC-11509	Seal Holder	1
20	H-BM5X16BH	M5X0.8X16 Button Head Bolt	3
		Torque to 5 ft. lb with Loctite 243 (Blue)	
21	TC-12362	O-Ring, Seal Holder to Pump Cover	1
22	H-BM6X12FSH	M6X1X12 Flat Socket Head Bolt	3
		Torque to 8 ft. lb with Loctite 272 (Red)	
23	TC-24460	Teflon Sealing Ring, Late Style, Install in I.D. of Stator Support	1
(23)	TC-06848	Teflon Sealing Ring, Old Style, Install on Input Shaft	1
24	TC-24523	Stator Support-Long, Late Style	1
(24)	TC-05517	Stator Support, Old Style	1
25	H-D380500	3/8"X1/2" Dowel, Late Stator Support Only	2

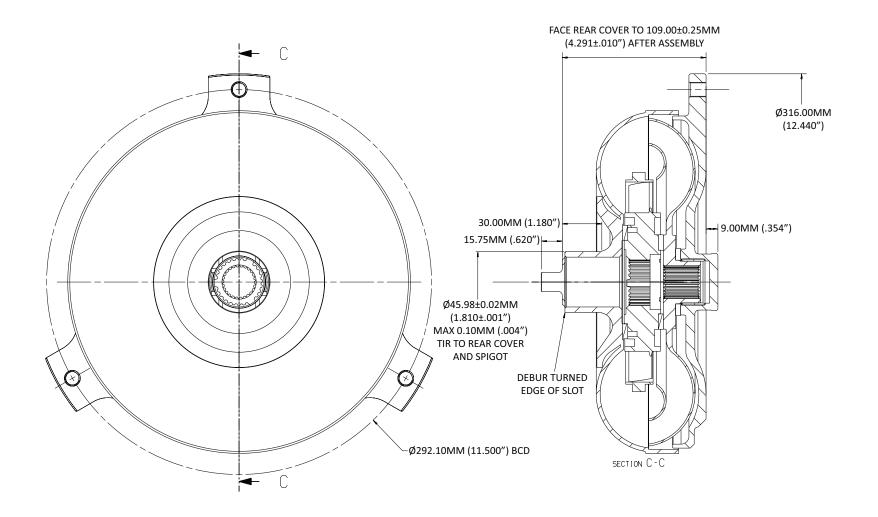


7200 Hollister Ave, Suite C Goleta, CA 93117 Ph 805-562-8600 • Fax 805-562-8661 info@weddleindustries.com Drawing No: AGB-EXP-TC-PUMP

Drawing Name: Torque Converter Pump Assembly

Drawn By: RX Revised: 5/9/23

## ALBINS TORQUE CONVERTER - EXTERNAL DIMENSIONS FINAL MACHINING FOR CHEVY STYLE CONVERTER





7200 Hollister Ave, Suite C Goleta, CA 93117 Ph 805-562-8600 • Fax 805-562-8661 info@weddleindustries.com Drawing No: TC-CONV-EXTDIM
Drawing Name: Albins Chev TC Ext Dims

Drawn By: JW

Revised: 3/21/2022