

NO. 36      DATE Nov. 1, 1986       SALES    SERVICE

**SUBJECT: ELECTRONIC TIMING UNITS FOR SUPERIOR GTLA/SGTA ENGINES**

Altronic has available an electronic variable timing system to replace the pneumatic ignition timing control on the Superior clean-burn GTLA and SGTA series engines. These units are used as standard equipment on the newer GTLB and SGTB series engines; the parts listed below provide a retrofit solution for the original series clean burn models.

A complete system consists of the following items:

1. Electronic Timing Unit - specifically programmed with the correct curve for the particular engine
2. Shielded Cable Assembly
3. High Output Back Cover Assembly with Electronic Timing Option  
NOTE: If the existing ignition system does not have a back cover with the second 6-pin electronic timing connector, it is necessary to purchase the back cover listed below.
4. Replacement housing package to convert the Altronic III unit back to the standard BEL mounting

The specific parts for each engine are listed below:

ENGINE MODEL	ITEM 1 ELECTRONIC TIMING UNIT	ITEM 2 CABLE ASS'Y.	ITEM 3 BACK COVER ASSEMBLY	ITEM 4 HOUSING KIT	COMPLETE ALT. III UNIT
6GTLA	381 610-1	593 047-24	381 802-1HT	320 005	6A39HT-BEL
8GTLA	381 610-2	593 047-18	381 803-1HT	320 005	8A29HT-BEL
12GTLA 12SGTA	381 610-3	593 047-18	381 804-7HT	320 005	12D36HT-BEL
16GTLA 16SGTA	381 610-4	593 047-18	381 809-7HT	320 005	16G33HT-BEL

NOTE 16-cylinder engines equipped with the 8L63-BEL Altronic III unit must be converted to the 16G33HT-BEL unit and the primary coil connections rewired.

The following additional items are recommended options

593 045 Shorting Plug - Permits operation as a standard Altronic III unit in the event of a problem with the timing unit.

DI/DIT-3400 - Altronic instrument providing a continuous digital readout of ignition timing in degrees BTDC - see form ADIT.

**INSTALLATION PROCEDURE:**

Time the Altronic III unit to the engine as follows:

- Set the Altronic III unit with the back cover timing mark lined up with the "CCW" line.
- Set the engine crankshaft position as shown in the table below for "TIMING DEGS. BTDC AT 900 RPM".

2. Plug the 593 047 cable assembly into the 6-pin connector on the Altronic III back cover. Connect the other end to the 381 610 timing unit matching the leads to the internal terminal strip as shown.

Ground the external screw terminal on the 381 610 timing unit (located below the cable entry) to engine ground.

4. With the engine running at 900 RPM, rotate the Altronic III unit to achieve the timing shown below for 900 RPM. The 381 610 unit will automatically give the correct timing at lower speeds.

ENGINE MODEL	TIMING DEGS. BTDC AT 900 RPM	TIMING RANGE 600-900 RPM
6GTLA	20° BTDC	6° - 20° BTDC
8GTLA	20° BTDC	6° - 20° BTDC
12GTLA, 12SGTA	18° BTDC	0° - 18° BTDC
16GTLA, 16SGTA	18° BTDC	3° - 18° BTDC

