



TECHNICAL BULLETIN

TB NO.1009

REV. 1

**SUBJECT: Development of Superior GT825
Clean Burn Conversion Kits**

GENERAL - In response to continued customer request **EnDyn** made the commitment to be the first to develop Clean Burn Conversion Kits for existing Superior turbocharged engines. The initial development incorporated a fully instrumented 8GTL engine with a H35 Elliott turbocharger, standard Altronic ignition, pneumatic air/fuel controls and loaded on a water brake dynamometer at varying BHP and RPM.

OBJECTIVE - Develop simplified best available technology emission control conversion kits with minimum changes to Superior turbocharged engines for GTLA/B reduced maintenance, increased availability and comparable certified emissions.

RESULTS - As indicated by the attached, the development objective was exceeded.

For further information or customer referenced concerning **EnDyn's** clean burn conversion kits, please contact our Technical Service Department direct or your local authorized **PowerParts®** Distributor.

NOTE: Customer is asked to complete information contained in Product Bulletin No. 107 prior to quoting kit.

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8GTLX EXHAUST EMISSIONS

RPM	BHP	PERCENT RATED LOAD	IGNITION TIMING (NBTDC)	EMISSIONS (GRAMS/BHP-HR)	
				NO _x	CO
900	1100	100	20	2.0	3.0
900	825	75	20	1.5	3.5
900	550	50	20	1.5	4.0
750	917	100	12	2.0	3.0
750	688	75	12	2.0	3.5
750	459	50	12	1.0	3.0
600	733	100	6	3.0	3.5
600	550	75	6	2.0	3.5
600	367	50	6	1.0	3.0

NOTES:

1. FUEL GAS - 90% Methane and low heating value of 900 BTU/SCF with a consumption of 7,100 BTU/BHP-HR at 900 RPM and 1,100 BHP.
2. TEMPERATURE - 100 °F ambient, 130 °F air manifold and 120 °F intercooler water.
3. HEAT REJECTION - at 900 RPM and 1,100 BHP: 7,500 BTU/MIN intercooler, 37,000 BTU/MIN* jacket water and 4,500 BTU/MIN lube oil.

* Engine equipped with standard water cooled exhaust manifold.

6GTLX EXHAUST EMISSIONS

RPM	BHP	PERCENT RATED LOAD	IGNITION TIMING (NBTDC)	EMISSIONS (GRAMS/BHP-HR)	
				NOx	CO
900	825	100	20	2.0	3.5
900	619	75	20	1.8	3.9
900	413	50	20	1.7	4.0
750	688	100	12	2.0	3.0
750	516	75	12	1.8	3.3
750	344	50	12	1.0	3.5
600	550	100	6	4.0	3.4
600	413	75	6	2.0	3.6
600	275	50	6	1.0	4.0

NOTES:

1. FUEL GAS - 90% Methane and low heating value of 900 BTU/SCF with a consumption of 7,150 BTU/BHP-HR at 900 RPM and 825 BHP.
2. TEMPERATURE - 100 °F ambient, 130 °F air manifold and 120 °F intercooler water.
3. HEAT REJECTION - at 900 RPM and 825 BHP: 4350 BTU/MIN intercooler, 26,000 BTU/MIN* jacket water and 4,000 BTU/MIN lube oil.

* Engine equipped with standard water cooled exhaust manifold.

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