



Detroit Diesel Allison

Division of General Motors Corporation

Indianapolis, Indiana 46206

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MASTER

GAS TURBINE ENGINES AND TRANSMISSIONS
FOR BUS DEMONSTRATION PROGRAMS

Technical Status Report
for Period 30 April 1979 - 31 July 1979

Prepared by:

D. N. Nigro

D. N. Nigro
Supervisor
IGT Applications

Approved by:

E. E. Flanigan

E. E. Flanigan
IGT 404/505
Chief Project Engineer

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Detroit Diesel Allison Division, GMC
Indianapolis, Indiana

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Prepared for

Department of Energy
Chicago Operations Office
9800 South Cass Avenue
Argonne, Illinois 60439

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Introduction

This technical status report is to fulfill the contractual requirements of Contract EM-78-C-02-4867. This quarterly status report covers the period from 30 April 1979 through 31 July 1979 and is a summary of DDA activities for the effort performed on the procurement and delivery of eleven (11) Allison GT 404-4 gas turbine engines and five (5) HT740CT and six (6) V730CT Allison automatic transmissions and the required associated software.

The contract requires the delivery of eleven (11) Allison GT 404-4 Industrial Gas Turbine Engines and five (5) HT740CT and six (6) V730CT Allison Automatic Transmissions for the Greyhound and Transit Coaches, respectively. In addition, software items such as cost reports, technical reports, installation drawings, acceptance test data and parts lists are required.

A recent decision by the DOE will modify the build configuration for the last four (4) Transit Coach engines. It was decided by the DOE at a meeting in Washington, D.C. on March 28, 1979 with representatives from DDA, NASA/LeRC, JPL & Booz-Allen & Hamilton that these engines will be built with ceramic regenerators.



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The five (5) Greyhound Coach engines and the first two (2) Transit Coach engines are being built in the all-metal configuration. The all-metal Transit Coach engines will be used to verify the coach installation design, power package to vehicle interface systems performance, and overall vehicle operation, but are expected to be converted to the ceramic regenerator configuration prior to commencing revenue service operation.

The Master Schedules for this program are attached. The schedules reflect revised delivery dates for the engine/transmission power packages. This has resulted from parts procurement problems, both late deliveries and poor quality. Also, because of these delays, the DOE recommended a change in the engine build sequence to alternate between Greyhound and Transit Coach engines, rather than complete the Greyhound build first. The schedules reflect the new build sequence.

Status

Assembly and acceptance testing for the five (5) HT740CT Transmissions has been completed.

Power package delivery was initiated. Deliveries completed during this reporting period are summarized below.

<u>Greyhound Coach Power Package</u>	<u>Date Shipped</u>
Engine S/N T5/HT 740 CT S/N 30576	6-19-79
Engine S/N T6/HT 740 CT S/N 29804	7-12-79



Testing of the Transit Coach engine, S/N T10, was completed. This engine is being used in-house for the acceptance testing of the six (6) V730CT transmissions. Upon completion of this task, the engine will be refurbished and delivered as the last engine under the contract.

Transit Coach engine S/N T11 was assembled and the engine completed acceptance testing on 17 July 1979. The engine is awaiting receipt of the first V 730 CT transmission for power package assembly and delivery. It is expected that power package delivery will be in early August 1979. Engine S/N T11 incorporates revised fuel system plumbing and support bracket for relocation of components to eliminate coach installation interferences as identified during the mock-up efforts.

Acceptance testing of Greyhound Coach engine S/N T7 is in progress and it is expected that this engine will be available for delivery at the beginning of August 1979.

Assembly of Transit Coach engine S/N T12 has started.

The Monthly Cost Report for July 1979 is being submitted under separate cover. The Monthly Cost Reports for October 1978 through June 1979 were delivered to the DOE on schedule.

The acceptance test data and parts lists for engine S/N T5/transmission S/N 30576 power package and engine S/N T6/transmission S/N 29804 power package have been submitted under separate cover.

