

Date: February 5, 1998
To: Bill Palmer, Joe Bates
From: Alan Dunmore
Subject: MEETING AGENDA - 1998 BR 1500 PROGRAM

Doc. No.:

• Front Disc Assemblies

- Status of RFQ - *ALLIED TO SEND QUOTE ON FRT. LINING. (RFR IN SYSTEM) - TURN AROUND IN (1) DAY ALLIED SIGNAL*
- Shoe plate issues - dimensions *JOE TO CHECK ON WHAT HE SUPPLIED AS CRITICAL DIMENSIONS. KEN CONLEY.*
- U clip - *MUST USE EXISTING CIP*
RAP APRIL 9 TO DELPHI 475MM - MINOR CHG ON INSULATION & MINOR CHG TO SHOE.
- 2 wks w/old CIP. • 1000 vehicle set order - update

- Timing. - *PRODUCTION*
8wks Pull Ahead 600,000 Pcs/TR.
- Rear asbestos linings *14 TOTAL CALIPERS 15 WEEKS.*
- Timing.
- ~~RFQ?~~

DELPHI - DETERMINE IF WE CAN USE CIP IN PROCESS OF FRT. TOOLING.

ALLIED SIGNAL - DETERMINE C/T TO MOVE P.P FOR DELPHI STRUCTURAL CIP.

ALLIED SIGNAL - DETERMINE C/T FOR ASSUMED CIP & A/S EXISTING SHOE PLATE.

Vehicle Testing

- Lock up tests

- Next LA test. - *7822 FRT. & 4035/4070 REAR* *3 TESTS* *ALLIED - LA.* *DELPHI - DAYTON*

Meeting preparation for 2/18/98.

PRODUCTION GORDON ESTABLISHING TIMING.
DELPHI TIMING - GORDON SUGGEST TBD.
8WKS. MASTER FOR CASTING (WET PROCESS 3184/3179 ALLIED SIGNAL.

ALLIED SIGNAL TO CONDUCT IN STOP LOCK UP TESTS A/S OFF TO ESTABLISH SKID POINTS. BOOTH PAGES

- 1000 vehicle sets where to.

- 250 V/S can be available prior to 15MAR

- DO WE WANT DELPHI TO CONTINUE WITH CIP TOOLING IN LIEU OF CHARGE TO ALLIED SIGNAL FRT. LINING. MAT'L.

- PALMER - NEED ANSWER ON SET COST FOR ASBESTOS LININGS.

DELPHI

Chassis Systems

Milford Chassis Systems Group
General Motors Proving Ground
M/C 483 - 307 - 116
1 GM Road
Milford, MI 48380 - 3726

DATE: 2/3/98

TO: William Palmer
Group Leader-Chassis Quality
Dodge Ram Platform

cc: P. Ellison G. Seeley D. Homan M. Kopka G. Schaefer - Delphi Chassis
A. Dunmore D. Karam - Allied Signal
S. Brown J. Schumaker - Jeep Truck Engineering

FROM: Joseph A. Bates

SUBJECT: Dodge 1500 Series Truck Brake Lining Changes

In an effort to improve the effectiveness and lining life concerns with the current base brake system of the 1500 series truck you proposed replacing Delphi's 8090 front material with Allied Signal's 7822 lining material and requested Delphi Chassis' recommended replacement for the current 9100 rear lining material. The recommendation was to consider utilizing Delphi's 4035/4050 rear material. Assuming that the nominal output of the 7822 material was equal to that of the 8090 material I performed a computer simulation to evaluate the brake balance of the vehicle with this new lining combination (7822 & 4035/4050). The simulation predicted the vehicle would be excessively rear bias if all other componentry remained the same. Allied Signal has performed skid limitation tests with this lining combination and it failed to reveal any rear bias concern. This tends to suggest that either the rear material was low in effectiveness or the 7822 material is more effective than the 8090 material. Collectively, Delphi Chassis, Allied Signal and Chrysler need to establish a plan to evaluate the proposed changes such that we fully comprehend the overall task at hand and how it can be executed most expediently.

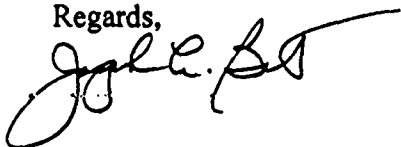
I believe that a closer examination of the system performance with the two new lining materials is warranted. This closer examination at minimum should include the below:

- Identify output of 7822 lining on vehicle
- L.A. durability test
- Review 4th effectiveness displacements —
- FMVSS105 testing
- Cincinnati durability test
- Computer simulation of balance and effectiveness

The timing and responsibility for each of these tests identified needs to be established immediately.

Finally, these tests and analysis represent a mini-validation test plan for the lining changes. It is recognized that due to the brevity of this testing it is not possible to attach a high level of statistical validity to the results, however, gross system performance concerns and directionally correct system configuration should be identified.

Regards,

A handwritten signature in black ink, appearing to read "John L. Smith". The signature is fluid and cursive, with a long horizontal stroke extending to the right.