

L42 Task force conference call

5-4-2006

Attendees:

C. Koglin
D. Bartlett
D. Lind
B. Koehler
D. Smith

Reporting form related issues

Issue: Shock starting temps are reported on form 3. Currently the starting temperature specification is on Form 3, but only for the standard test. It does not have the specification for the Canadian starting temperatures.

Resolution: The group decided to remove the specification from form 3 altogether so either the standard or low temperature version of the test may be reported in these fields.

Issue: The conditioning temperature specification on Form 2 does not line up with what the specification calls out.

Resolution: To be consistent, the group decided to remove the specification altogether.

Task force decided to move the percent deviation calculation chart from form 3 to form 2. The percent deviation calculations cover the conditioning portion of the test and therefore should be on the conditioning summary page.

The Task force agreed to use the arithmetic rules when reporting min, max and average data for conditioning and shock torques.

Draft 17 February 28, 2006 discussion

Issue: Section A1.1, note 3. The current wording suggests that labs interpret this differently. While one lab may use 15°F above 200°F as the limit, others will use 15°F above the starting shock 2 temperature, which could be anywhere between 195-205°F.

Resolution: Group decided to table discussion until SP meets May 9th for further discussion.

Issue: In sections 4.1 and 6.2 of procedure, the dana model 44 part# 044AA100-1 is spelled out, but it does not specify what batches, etc to use. So can anyone just call dana order this hardware and run the test method?

Resolution: Answer is No, in order to run in accordance with this procedure, the stand must be calibrated, which would make the lab have to follow the LTMS, in which, axle batches are specified. The lab would also have to contact TMC in order to obtain reference oils at which point obvious questions would be asked if lab is not already in the system.

Action Item: Don Lind to come up with wording on how to incorporate wording such as **Complete:** Wording added to section 10.1-See TMC memo 94-200 for approved gear batch and test targets. (Sections 4.1 and 6.2 can refer to 10.1)

Issue: Section 8.2.1 recommends that a pattern of L2/F0 or L3/F0 should be used for testing. Concern is how does a lab verify this? Don Bartlett provided an explanation as follows:

Ken Okamuro did state that Dana definitely will not release the pattern contact chart for use in this standard being that the exact document is proprietary. The contact rating was so new to us, we were all involved, and we developed an understanding from the ground up as we walked through the 1998 batch. We took it sort of as profound knowledge and 'fact' from there on. The options the panel struggled with as I best recall is that we could:

1) Accept the fact that a new lab would have to work with Dana ASTM contact, the TMC and L-37 SP. Each lab was provided an unofficial color copy. We have unofficial copies that were provided in past minutes as well.

2) Take the Contact Rating file from Dana, strip off all reference to Dana, and further modify the file so that we could legally use/develop a process to attempt to get the document published as some form of reference document.

We chose option one because of all the work and time and effort required. Maybe we dropped the ball by not proceeding forward, but I would have to research the minutes to be fully sure. Besides, Dana was putting the ratings on all axles were were receiving except for axles received before around 1998.

Resolution: Task force decided to incorporate the following sentence into section 8.2.1-Photo aides for contact pattern may be acquired from Dana

Issue: Section 8.2.3 states Record backlash at four equally spaced locations. The average of the four readings shall be between .004” and .009”. Does this mean a lab can use a gear with .003”, .003”, .01” and .01” (average=.0065”) even though any one reading wasn’t between the spec?

Resolution: Labs decided to change wording to the following: The four readings shall be between .004” and .009” and report the average.

- All labs agreed as long as we could review this for each new gearbatch
- Don Lind reviewed the L42 database and the data was as follows:
 - There was a total of 387 tests that had data from 1/1/02 to 5/5/06.
 - There were no backlash values outside the spec of .004 to .009.

Section 9.2 discussion:

Issue: There seems to be a disconnect between the acceptable LTMS bands vs what LRI will accept. Chairman is not 100% sure if this is true, but there is no documentation related to the LRI rule. Currently labs will run a reference sequence (3 passing, 1 failing). Assume the first 3 passing oils come out as follows:

1. 30% score
2. 32%score
3. 27% score

Even though these results are within the LTMS bands, the LRI might not accept the 32% result. Therefore, a lab will typically choose to run another passing oil. This would then allow the lab to choose 3 of the 4 results to present to LRI. Bill Sullivan has referred to this as “cherry picking” the data. The process described above is the same in the current L42 procedure.

Resolution: Review at SP meeting May 9th in Detroit.

Action Item: All labs to review conditioning 2 and conditioning 4 data from matrix and report the time it took to perform those phases. Have data to review at May 9th, 2006 SP meeting.

Other

Parc updated the group on their action item from April SP meeting. Parc has completed a 2 groups of 6 back-to-back L42-1 tests on the same axle.

- First 4 tests were repeatable, but last 2 tests torque during shock 2 was 40lb-ft less. Dale explained that there premium fuel ran out and they ran the last 2 tests on mid-grade
- 2nd group of 6 tests were repeatable, but wheels speeds were differentiating because of the loose axle.

Lubrizol will not be able to provide statistician to review matrix data.