



Committee D-2 ON PETROLEUM PRODUCTS AND LUBRICANTS

JLZ
Central File

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March 10, 1993

Reply to: Gordon R. Farnsworth
Exxon Chemical Co.
P.O. Box 536
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Tel: (908) 474-3351
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Doc. No. 93PPM 756

**TGC BALLOT
REQUIRES ACTION**

To: Technical Guidance Committee Members

Late last year, I circulated a letter ballot to get group acceptance of a "Test Development Flow Plan" which could be issued as an ASTM guide. There were many comments on this initial draft. Based on these inputs, a new Test Development Flow Plan draft has been written and is attached for your review. The changes are highlighted with shading. There are two flow plans:

- Surveillance Panel is test developer.
- OEM is test developer.

Please review these documents and then return the accompanying ballot proposing these drafts be forwarded to D02.B0 for ballot as an ASTM guide. I need your response by April 2. If there are no substantial negatives I will forward to D02.B0 for ballot. If consensus is not apparent by a significant majority then this issue will remain an agenda item for our next meeting.

Very truly yours,

GORDON R. FARNSWORTH, Chairman
Technical Guidance Committee

pjr

Attachments

Technical Guidance Committee

Ballot on "Test Development Flow Plan"

Return by April 2 to:

Gordon R. Farnsworth
Exxon Chemical Company
P.O. Box 536
Linden, NJ 07036

Fax: (908) 474-3597

Proposal: The two attached documents - - -

- Test Development Flow Plan when Surveillance Panel is Test Developer.
 - Test Development Flow Plan when OEM is Test Developer.
- should be forwarded to D02.B0 for ballot as an ASTM "guide".

I agree with the proposal

I disagree with the proposal

Comments: _____

Name: _____

Date: _____

Signature: _____

Company: _____

ASTM D.02
SUBCOMMITTEE B
RESEARCH REPORT - TEST DEVELOPMENT FLOW PLAN
WHEN SURVEILLANCE PANEL IS TEST DEVELOPER

The following document was proposed at the September 17, 1992 Technical Guidance Committee meeting as a checklist to be used by Section Chairmen in Subcommittee B of ASTM Committee D.02 when bringing new test procedures on-line as ASTM Test Methods and ASTM Monitored Tests. It breaks the test development process down into tasks to be completed by the Surveillance Panel or Task Force, Subcommittee B and Oil Classification Panel.

This Flow Plan was designed to be used by the Surveillance Panel or Task Force where there is no OEM acting as Test Developer, or where an OEM limits their participation.

ITEMS TO BE CHECKED DURING TEST DEVELOPMENT

Need for Test

- Identify need for new test in conjunction with SAE, MVMA, EMA, etc.. This need may be as simple as replacing a test with obsolete hardware, or as involved as attempting to simulate a known field problem(s).
- Collect field test data or run field tests, as necessary to document problem.
- Assure that no existing test or oil category will satisfy the performance need.

Hardware

- Identify test hardware platform. This should be a platform in which the OEM intends to support all major components for a minimum of five years after the test is included in a performance category.
- Identify critical parts (Parts known to affect test severity and/or precision).
- Establish specifications and processes for assuring consistent hardware quality.
- Obtain commitments for long-term (5-year) supply of hardware and critical test components (fuel, solvents, cleansing agents).
- Release hardware to Industry for matrix testing.

ASTM SUBCOMMITTEE B -- TEST DEVELOPMENT FLOW PLAN
SURVEILLANCE PANEL AS TEST DEVELOPER

ITEMS TO BE CHECKED DURING TEST DEVELOPMENT, continued

Procedure

- Establish test procedure.
- Establish rating/parts evaluation methods.
- Establish pass/fail parameters.
- Establish success criteria (precision, discrimination).
- Assure that number of pass/fail parameters is not excessive.
- Establish test stand design requirements.

ITEMS TO BE CHECKED BY SURVEILLANCE PANEL

Procedural Development

- Establish test development time goals and create Gantt Chart.
- Establish source and specification for fuel.
- Develop rating/parts evaluation methods.
- Establish consistent assembly practices among test facilities.
- Select reference oils which discriminate quality, are current chemistry, can be blended in five-year supplies.
- Select at least one reference oil which yields passing results in all tests for the category which the proposed test is destined to be a part.
- Develop test procedure to meet ASTM standard Blue Book requirements.
- Perform laboratory visitation to assure equivalency of test stands and that Surveillance Panel has resolved any variations found in test stand configurations.
- Document correlation of pass/fail parameters with field experience.

ASTM SUBCOMMITTEE B -- TEST DEVELOPMENT FLOW PLAN
SURVEILLANCE PANEL AS TEST DEVELOPER

ITEMS TO BE CHECKED BY SURVEILLANCE PANEL, continued

Reference Requirements

- Maintain on-going quality improvement program to identify and handle new critical parts
- Establish calibration requirements (frequency, control charting, etc).
- Develop operational validity requirements.
- Conduct statistically designed matrices on reference oils to quantify precision, discrimination and field correlation.
- Obtain commitment and participation of ASTM Test Monitoring Center.

Data Handling

- Develop severity adjustment system.
- Establish statistically based Multiple Test Acceptance Requirements (MTAC).
- Complete writing Test Development report (file as ASTM Research Report).
- Presentation of Test Development report and all data to Oil Classification panel.

ITEMS TO BE CHECKED BY SUBCOMMITTEE B / OIL CLASSIFICATION PANEL

Test Acceptance

- Establish proposed performance limits
- Ballot in affected Subcommittee.
- Resolution of negative ballots.

ASTM SUBCOMMITTEE B -- TEST DEVELOPMENT FLOW PLAN
SURVEILLANCE PANEL AS TEST DEVELOPER

ITEMS TO BE CHECKED BY TEST SPONSOR / SURVEILLANCE PANEL /
OIL CLASSIFICATION PANEL

Test Maint.

- Monitor Test Severity and Precision
- A process is in place to provide for the continual improvement of the test.
- Develop a process for the tracking (use or reject), identification and improvement of critical test parts.
- Maintain test lab equivalency

ASTM D.02
SUBCOMMITTEE B
RESEARCH REPORT - TEST DEVELOPMENT FLOW PLAN
WHEN OEM IS TEST DEVELOPER

The following document was proposed at the September 17, 1992 Technical Guidance Committee meeting as a checklist to be used by Section Chairmen in Subcommittee B of ASTM Committee D.02 when bringing new test procedures on-line as ASTM Test Methods and ASTM Monitored Tests. It breaks the test development process down into tasks to be completed by the Test Developer, Surveillance Panel or Task Force.

This flow plan was written from the perspective that the Test Developer is an OEM who desires to have a lubricant test developed around their hardware. It should be noted that the Test Developer's input is not necessarily limited or confined to any specific area on this flow plan. Their input is integral throughout the test development process.

ITEMS TO BE CHECKED BY TEST DEVELOPER

Need for Test

- Identify need for new test in conjunction with SAE, MVMA, EMA, etc.. This need may be as simple as replacing a test with obsolete hardware, or as involved as attempting to simulate a known field problem(s).
- Collect field test data or run field tests, as necessary to document problem.
- Assure that no existing test or oil category will satisfy the performance need.

Hardware

- Identify test hardware platform. This should be a platform in which the OEM intends to support all major components for a minimum of five years after the test is included in a performance category.
- Identify critical parts (Parts known to affect test severity and/or precision).
- Establish specifications and processes for assuring consistent hardware quality.
- Obtain commitments for long-term (5-year) supply of hardware and critical test components (fuel, solvents, cleansing agents).
- Establish test procedure.
- Release hardware to Industry for matrix testing.

ASTM SUBCOMMITTEE B -- TEST DEVELOPMENT FLOW PLAN
OEM AS TEST DEVELOPER

ITEMS TO BE CHECKED BY TEST DEVELOPER, continued

Procedure

- Establish specification for test fuel.
- Develop rating/parts evaluation methods.
- Establish pass/fail parameters.
- Establish success criteria (precision, discrimination).
- Establish test stand design requirements.

ITEMS TO BE CHECKED BY SURVEILLANCE PANEL IN COOPERATION WITH
THE TEST DEVELOPER

Procedural Development

- Establish test development goals and create Gantt Chart.
- Establish source for test fuel.
- Establish rating/parts evaluation methods.
- Develop consistent assembly practices among facilities.
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ASTM SUBCOMMITTEE B -- TEST DEVELOPMENT FLOW PLAN
OEM AS TEST DEVELOPER

ITEMS TO BE CHECKED BY SURVEILLANCE PANEL IN COOPERATION WITH
THE TEST DEVELOPER , continued

Reference Requirements

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OEM AS TEST DEVELOPER

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