

LEAD INDUSTRIES ASSOCIATION

485 LEXINGTON AVENUE

NEW YORK 17, N. Y.

RED LEAD DIVISION

CONFIDENTIAL - FOR COMMITTEE USE ONLYSUBJECT TO REVISIONRED LEAD TECHNICAL COMMITTEE

New York, N. Y., September 28-29, 1944

On Thursday, September 28, the members of the Technical Committee proceeded to Sayville, L.I. to inspect the panels on exposure. The following were present:

COMMITTEE

A.C. Coats
 O.F. Shobe
 George Dickman

REPRESENTING

Engle-Picher Lead Co.
 Glidden Co.
 National Lead Co.

L. L. Carriak, Director of Red Lead Research

INSPECTION OF TEST PANELS1. TOTAL IMMERSION EXPOSURES

These panels were placed on total immersion exposure at the National Lead Co. Marine Test Basin, Sayville, L.I. on September 23, 1943. They have been on exposure for almost exactly 12 months.

A. Four Hour Dry Between Coats - U.S.M.C. Anti-Fouling Top Coat

These panels were coated with two coats of the primer and one coat of U.S.M.C. anti-fouling paint and were allowed to dry four hours between coats. They were rated in the following order, No. 1 being the best:

No. 1 - Panel No. 4549C; this panel was covered with pigmentation d and vehicle 18 (old number).

No. 2 - Panel No. 4412C; this panel was covered with pigmentation d and vehicle 20 (old number).

No. 3 - Panel No. 4411C; this panel was covered with pigmentation A and vehicle 8 (old number).

B. Four Hour Dry Between Coats - National Lead Co. M-2348 Anti-Fouling Top Coat

These panels were allowed to dry four hours between primer coats and four hours before the application of M-2348 anti-fouling top coats. Panel No. 1 was the best.



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No. 1 - Panel No. 4845C was rated first. The primer consisted of pigmentation J and vehicle 20 (old number). This was considered the best panel of all the total immersion tests.

No. 2 - Panel No. 4851C was rated second. It was covered with pigmentation J and vehicle 13 (old number).

No. 3 - Panel No. 4878C was rated third. It is the Navy 52-P-18. This panel should be compared with panel No. 4872C which has the U.S.M.C. anti-fouling top coat. Panel No. 4878C is normal for 52-P-18 exposures.

C. Twenty-Four Hour Dry Between Coats - U.S.M.C. Anti-Fouling Top Coats

These panels were covered with two coats of the primer followed by one coat of U.S.M.C. anti-fouling primer. Time to dry between coats was 24 hours. Panel No. 1 was the best.

No. 1 - Panel No. 4850C was considered the best panel of this series. It was covered with pigmentation J and vehicle 13 (old number).

No. 2 - Panel No. 4844C was considered the second best for this class. It was covered with pigmentation J and vehicle 20 (old number).

D. Twenty-Four Hour Dry Between Coats - National Lead Co. M-2345 Anti-Fouling Top Coats

These panels were covered with two coats of primer followed by one coat of National Lead Co. M-2345 anti-fouling top coat. These panels were allowed to dry twenty-four hours between coats. Panel No. 1 was the best.

No. 1-Panel No. 4882C was rated first. It was covered with pigmentation J and vehicle 13 (old number).

No. 2-Panel No. 4846C was rated second. It was covered with pigmentation J and vehicle 20 (old number).

VEHICLES INVOLVED ARE --

Vehicle 13 is 60% by wt. LV287 (six-gallon length); 40% by wt. medium linseed oil alkyl, 84% phthalic anhydride (GE2454).

Vehicle 20 is 40% by wt. linseed oil alkyl, (84% phthalic anhydride) (GE2454); 60% by wt. LV266 varnish (E2452) 10-gallon length.

Vehicle 8 is a 60-gallon varnish containing Durac 430 resin.

THE PIGMENTATIONS INVOLVED ARE --

	A	B	C
Red Lead(97% grade)	45%	50%	50%
Zinc Oxide	10%	10%	10%
Zinc Chromate	-	10%	-
Iron Oxide	30%	7%	-
Magnesium Silicate	10%	10%	10%
Diatomaceous Silica	5%	5%	5%
Monobasic Lead Chromate	-	-	30%

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GENERAL SUMMARY

First and second place ratings were awarded to pigmentation J.

Vehicle 18 (old number) received first place rating as follows:

Panel No. 4849C - a four hour drying time between paint coats was employed. The top coat is UMC anti-fouling paint.

Panel No. 4850C - a twenty-four hour drying time between paint coats was employed. The top coat is U.S.-McC. anti-fouling paint.

Panel No. 4852C - a twenty-four hour drying time between paint coats was employed. The top coat is National Lead Company's anti-fouling paint M-2346.

Vehicle 20 was given a first-choice rating on the showing of Panel No. 4845C. This panel dried four hours between coats and had a top coat of National Lead Company's anti-fouling paint M-2346.

Thus, Vehicle 18 received three first ratings to one for Vehicle 20. Vehicle 20 was given three second-choice ratings; Vehicle 18 one second choice rating.

It should be noted that these paints were designed for a four hour dry between coats and that the inspection data shows that these paints dry or give better exposure when applied as a four hour system rather than applied as a twenty four hour system between coats. (For details of the inspection data for Total-Immersion Exposure see Exhibit A attached.)

II. TIME-RANGE EXPOSURES

Panels were allowed to dry twenty four hours between coats. An examination of the enclosed inspection sheet will indicate the first, second and third-choice ratings. (Attached as Exhibit B).

Here, again, it should be observed that pigmentation J received the first, second and third place rating although pigmentation L showed up quite well and could also be considered as a third place rating pigmentation.

Vehicle No. 20 received first place rating. Vehicle 21 second place rating. Vehicle 22 and 8 received third place ratings. It should be noted that Vehicle 20 is a lower oil resin than Vehicle 18 which showed up as well as an undercoat, primer vehicle.

III. ATMOSPHERIC EXPOSURES

No attempt was made to evaluate the atmospheric exposure data, but the inspection data is included for your files. (Attached as Exhibit C.)

The inspection lasted until 8:00 P.M. when the members returned to New York to reconvene at 1:00 P.M., Friday, September 29, at the Association's New York Office.

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The Technical Committee reconvened on Friday, September 29, at 1:15 P.M. at the Association's New York Office. The following were present:

PRESENT

A.C. Goets
O.P. Shobe
George Diehlman
A.J. Kimmhoff

REPRESENTING

Engle-Picher Lead Co.
Glidden Co.
National Lead Co.
National Lead Co.

L. L. Carrick, Director of Red Lead Research

REPLY TO MR. THUSSEN'S ARTICLE IN THE "OFFICIAL DIGEST" OF THE
FEDERATION OF PAINT & VARNISH PRODUCTION CLUBS, NO. 239

Exhibit B of last Red Lead Meeting Minutes, August 25-26, 1944, which constitutes a reply to Mr. Thussen's article in the "Official Digest" of the Federation of Paint & Varnish Production Clubs, No. 239, was approved by the Committee and is being forwarded to the editor of the "Official Digest."

PROTECTIVE COATINGS FOR GALVANIZED IRON

The Committee reviewed the data submitted by Don Critchfield, Agricultural Service Director of the Lead Industries Association in regard to painting of galvanized surfaces. It was decided to make a further study of the general practices of painting on galvanized iron before initiating any additional research programs.

Galvanized iron which has weathered over six months or has been rusting and has been properly cleaned does not require any special formulation of red lead for its protection. Regular quick-drying red lead is satisfactory and should give excellent service.

PURE RED LEAD RESEARCH PROGRAM

The red lead research program as outlined in Exhibit E of the August 25-26 Meeting Minutes of the Red Lead Technical Committee has been deferred for future consideration. It was thought by the members of the committee that the points of investigation suggested in this program could best be done as an academic research project and would not constitute a source of immediate facts for promoting the red lead research program.

CONSIDERATION OF THE INSPECTION DATA OBTAINED AT SAWVILLE, L.I., SEPTEMBER 28, 1944

It was decided because of the splendid showing of vehicle 13 and vehicle 20 that these should constitute the basis of further study with the view of reducing their cost and the possibility of improving their exposure characteristics. In accordance with this idea a set of formulations given in Exhibit D were approved. These primers are to be made up as soon as possible and they are to be placed on exposure at the North Florida Test Station, Daytona Beach, Florida so we may have an early report as to their characteristics.

NEXT MEETING DATE

It was decided not to have the October meeting as the Chairman will be away on a Western trip interviewing shipbuilders on the Pacific Coast. The date of the Nov. meeting will be announced about the middle of Nov. after consulting the Committee members.

The meeting adjourned at 6:30 P. M.

L. L. Carrick

L. L. Carrick, Director
Red Lead Research

COLLEGE YEAR 1945-1946

	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100			
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4-100	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72																												

EXPERIMENT BY J. L. FULTON, JR., 1960

COMPOSITE MATERIALS

EXPERIMENTAL DATA										REMARKS	
TEST NO.	DATE	TIME	TEMP.	MOIST.	WIND	WAVE	SWELL	SEA	WIND	REMARKS	
1	12	1	4	4						Up to 1" (" " " ")	
2	12	2	5	5						Failure	
3	12	3	6	6						Up to 1 1/2" (" " " ")	
4	12	4	7	7						Up to 1 1/2" (" " " ")	
5	12	5	8	8	7	6				Up to 1" (" " " ")	
6	12	6	8	8	6	5	7 to metal			Longitudinal cracks to metal.	
7	12	7	9	10		5				Up to 1 1/2" (" " " ")	
8	12	8	9	9		4				Up to 1 1/2" (" " " ")	
9	12	9	8	8		5	7			Up to 1 1/2" (" " " ")	
10	12	10	5	5		5	6			Up to 1 1/2" (" " " ")	
11	12	11	5	5		5	6			Failure	
12	12	12	5	5		5	6			Complete Failure.	
13	12	13	6	6		5	6			Failure	
14	12	14	1	5		5	6			Blisters	
15	12	15	2	5		5	6			Failure	
16	12	16	2	5		5	6			Failure	
17	12	17	2	5		5	6			Failure	
18	12	18	2	5		5	6			Failure	
19	12	19	2	5		5	6			Failure	
20	12	20	2	5		5	6			Failure	
21	12	21	2	5		5	6			Failure	
22	12	22	2	5		5	6			Failure	
23	12	23	2	5		5	6			Failure	
24	12	24	2	5		5	6			Failure	
25	12	25	2	5		5	6			Failure	
26	12	26	2	5		5	6			Failure	
27	12	27	2	5		5	6			Failure	
28	12	28	2	5		5	6			Failure	
29	12	29	2	5		5	6			Failure	
30	12	30	2	5		5	6			Failure	

REC'D IN DEPT. OF STATE - AUSTIN TEXAS

COMPLETE INVESTIGATION

[illegible]

INSPECTION RECORD - ATMOSPHERIC EXPOSURE

EXHIBIT 6

 Date _____
 Water Temperature _____
 Humidity _____
 pH _____

 Project No. _____
 Date Exposure _____
 Lot No. _____
 Filtered Air _____

Y. P. No.	Panel No.	Paint No.	Corrosion	Testing 15										Coat.	Pooling	Remarks
				100	200	300	400	500	600	700	800	900	1000			
9 A	4487A	PM3-S	8													A -
9 B	4488A	PM3-S	8													AD - Duplicate panel of A.
8 A	4489A	PM3-S	9													
8 B	4490A	PM3-S	10													
10 A	4491A	PM3-S	8													
10 B	4492A	PM3-S	8													
1 A	4493A	S-2-S-A	4													
1 B	4494A	S-2-S-B	2													Little corrosion on second coat
2 A	4495A	S-2-S-A	9													
2 B	4496A	S-2-S-B	10													
3 A	4497A	S-2-S-A	8													
3 B	4498A	S-2-S-B	8													
1 B-C	4499	S-2-S-B	4													
1 B-A	4500A	S-2-S-A	3													
1 C	4501A	S-2-S-A	3													A few spots on second coat
15 B	4502A	S-2-S-B	4													A few spots on second coat
	4503A	G1144	8													
	4504A	G1144	8													A few spots on second coat

INSPECTION-RECORD-ATMOSPHERIC EXPOSURE

EXHIBIT C

Date of completion _____
 Initials _____
 Signature _____

Project No. _____
 Date Reported _____
 Lat. Long. LID _____
 Flaps and _____

V.	P.	Page	Date	Time	Location	Altitude	Weather	Remarks
6	A	4806A	M-1977	9				
6	A	4806A	M-1977	9				
6	A	4807A	M-1977	9				
6	E	4808A	M-1980	9				
12	B	4809A	M-1980	9				
6	B	4810A	M-1980	10				
7	B	4811A	M-1990	9				
7	A	4812A	M-1990	9				
6	L	4813A	M-1990	10				
6	B	4814A	M-1990	9				
		4815A	JAN XXII	9				

Only the gun port primer system was inspected.
The two vent primer systems and the primer systems
with top seats were in perfect condition, hence
they were not inspected.

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EXHIBIT B

PRIMERS FORMULATED AT THE SEPT. 29, MEETING OF THE TECHNICAL COMMITTEE

RESEARCH PROJECT NO. 9

MODIFICATIONS OF V-19 (VEHICLE IS OLD NUMBER)

L.I.A. Paints Nos. 185 to 188, inclusive constitute a variation of V-19 (old number 13) which has shown up as well at Dayville on underwater and tide-range exposures. The Glidden Co. has agreed to prepare these primer paints.

The vehicles are to be cooked so the varnish is 60% solids.

The thinning is to be done with a 60:80 mixture of Solvesso Nos. 8 and 8-1.

The primers are to be made up with a PV of 80. Should the paint with the PV of 80 have an excessive gloss then the PV should be increased to 85.

The viscosity should be between 70-75 KU. The KU to be run after the paint has stood twenty-four hours.

The size of the sample is to be 1 pint.

These samples should be shipped to Mr. George Dickman of the National Lead Co. who will make arrangements for painting and packing of them for shipment to the North Florida Test Station at Daytona Beach, Florida.

Pigmentation 75, which is to be used with all these primer paints, is:

Red Lead (97% grade)	80%
Zinc Chromate	10%
Iron Oxide	4%
Magnesium Silicate	18%
Diatomaceous Silica	6%
Micallith-O	10%

The directions for formulation of V-19 (old Vehicle 13) may be found on page 9, section 3 of the Data Book. Only the variation in the vehicle formulations are noted below.

L.I.A. NO.	PIGMENTA- TION NO.	VEHICLE NO.	COMPOSITION OF VEHICLE
185	P-75	V-19f (13f)	60% by wt. alkyl (GE2484 (IV-3181) 34% phthalic anhydride), 60% by wt. LV-287, except a 12 gal. oil length.
186	P-75	V-19g (13g)	60% by wt. alkyl (GE2484 (IV-3181) 34% phthalic anhydride), 60% by wt. LV-287 except 16 gal. oil length.
187	P-75	V-19h (13h)	60% by wt. alkyl (GE2484), 34% phthalic anhydride, 60% by wt. LV-287 except 26 gal. oil length.

* Old pigmentation and old vehicle numbers are in parenthesis.

N2852.04

Red Lead Technical Committee Meeting Minutes

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QUEST 2

158	A-75	V-19f (13f)	80% by wt. alkyl (GE2454), 80% LV-257.
159	A-75	V-19g (13g)	80% alkyl (GE2454), 60% LV-257.
160	A-75	V-19h (13h)	80% alkyl (GE2454), 80% LV-257, as modified under V-19f (13f).
161	A-75	V-19L (13L)	80% alkyl (GE2454), 60% LV-257 as modified under V-19f (13f).
162	A-75	V-19m (13m)	60% alkyl (GE2454), 60% LV-257 except BR254 is used instead of BR9432. 6 gal. length.
163	A-75	V-19n (13n)	60% alkyl (GE2454), 60% LV-257 except BR254 is used instead of BR9432 and the oil length is raised 18 gal. length.

MODIFICATIONS OF VEHICLE V-19 (OLD VEHICLE 13) GROUND IN F-16 (OLD FIG. J.)

Since Pigmentation 75 has been extended to the point where it may not have sufficient anti-corrosive qualities and so that time may be saved it was thought advisable by Messrs. Goets, Dieckhoff and Carrick that the vehicles included in L.I.A. Prints Nos. 165-163, inclusive, should be ground with Pigmentation J as outlined below. The formulation of Pigmentation J is given on page 2, section A of the Data Book. Messrs. Diehlman and Shobe were not available for consultation. If they object to this part of the program, it may be omitted.

It is requested that Mr. Shobe make these paints. Details of formulation are the same as L.I.A. Paints No. 155 to 163 inclusive.

L.I.A. NO.	FIGURE- TION NO.	VEHICLE NO.	COMPOSITION OF VEHICLES
164	A-16(J)	V-19f (13f)	Same vehicle as used in L.I.A. Paint No. 180.
165	A-16(J)	V-19g (13g)	Same vehicle as used in L.I.A. Paint No. 180.
166	A-16(J)	V-19h (13h)	Same vehicle as used in L.I.A. Paint No. 187.
167	A-16(J)	V-19i (13i)	Same vehicle as used in L.I.A. Paint No. 188.
168	A-16(J)	V-19j (13j)	" " " " " " " " 189.
169	"	V-19k (13k)	" " " " " " " " 190.
170	"	V-19L (13L)	" " " " " " " " 191.
171	"	V-19m (13m)	" " " " " " " " 192.
172	"	V-19n (13n)	" " " " " " " " 193.

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EXHIBIT B

MODIFICATION OF V-26 (OLD VEHICLE 20)

The members of the Committee felt that Vehicle No. 20 had made such a good showing at Bayville that it was worthy of more study. The paints outlined below, L.I.A. Paints Nos. 173-178 inclusive, constitute variations in V-26 (old No. 20).

L.I.A. Paints 173, 174, 175 are to be ground in Pigmentation A-78 given above.

L.I.A. Paints 176, 177 and 178 are to be ground with Pigmentation A-16(J).

It is suggested these paints to be prepared by the Eagle-Fisher Lead Co.

The viscosity should be 70-75 KU, taken after the paint has stood twenty-four hours.

The PV of these paints should be 30, but, should the paints with a PV of 30 have excessive gloss, the PV may be increased to 35.

A one pint sample of each paint should be prepared and sent to Mrs. Diehlman who will prepare these for shipment to the North Florida Test Station, Daytona Beach, Florida.

The varnishes should be cooked to 60% solids. Thinning should be done with a 50:50 mixture of Solvesso Nos. 2 and 3.

The directions for formulation of V-26 (old vehicle 20) may be found on pages 11 & 12, section B of the Data Book. Only the variations in the vehicle formulation are noted below.

The formulation of Pigmentation J is given on page 2, section A of the Data Book.

L.I.A. PAINT NO.	PIGMENTA- TION NO.	VEHICLE FO.	COMPOSITION OF VEHICLE
173	A-78	V-26d	60% by wt. medium linseed oil alkyl (GE2454) 35% phthalic anhydride; 60% by wt. LV-268 and sept it is to be an 18 gal. length.
174	A-78	V-26e	60% by wt. medium linseed oil alkyl (GE2454), 35% phthalic anhydride; 60% modified LV-268 used in V-26d.
175	A-78	V-26f	60% by wt. medium linseed oil alkyl (GE2454) 35% phthalic anhydride; 60% modified LV-268 used in V-26d.
176	A-16(J)		Same vehicle as used in L.I.A. 173.
177	A-16(J)		" " " 176.
178	A-16(J)		" " " 176.

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EXHIBIT B

The following standards should be included in this series of tests:

- 57-P-18, October 15, 1942
- 62-P-18, December 1, 1943
- 63-W-29, September 21, 1943
- 67-MC-25, August, 1943
- L.I.A. Joint No. 6 - P-16(J), V-12 (old no. 13).
- L.I.A. Joint No. 6 - P-16(J), V-26 (old no. 20).