

**HYDRAULIC FLUIDS FOR CONSTRUCTION MACHINERY
(JCMAS P 041:2004, JCMAS P 042:2004) IMPLEMENTATION MANUAL
ERRATA (Revised April 2017)**

An article and a paragraph	Page	Position	False	True
Cover Page	1	-	(Revised April 2014)	(Revised April 2017)
Table 2	11	Service Life Evaluation with Model A2F Pump	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % +10
Table 2	11	Vane Pump Test	Lubricity Evaluation with Model 35VQ25 Pump (20.79 MPa, 400 min ⁻¹ , 93°C, 150 hrs), mg	Lubricity Evaluation with Model 35VQ25 Pump (20.79 MPa, 2400 min ⁻¹ , 93°C, 150 hrs), mg
Table 2 Remarks:	11	6)	or the Model A2F Pump Test in accordance with JCMAS P045.	or the Model A2F Pump Test in accordance with JCMAS P045. In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.
Table 2 Remarks:	11	7)	or the Model 35VQ25 Pump Test in accordance with ASTM D6973	or the Model 35VQ25 Pump Test in accordance with ASTM D6973. Either 7.1) or 7.2) procedures below are acceptable for the 35VQ25 Pump Test. 7.1) Continuous 150 hours test run with single test pump cartridge and pass the acceptance criteria. 7.2) Three of 50 hours tests run on the same candidate oil but with three test pump cartridges. Each test has to pass the acceptance criteria.
Table 5	17	Service Life Evaluation with Model A2F Pump	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % ⁷⁾ +10
Table 5 Remarks:	17	7)	-	In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.

Form-2a-2	43	High-pressure Piston Pump Test ⁶⁾	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % +10
Form-2a-2 Remarks:	45	6)	or the Model A2F Pump Test in accordance with JCMAS P 045.	or the Model A2F Pump Test in accordance with JCMAS P 045. In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.
Form-2a-2 Remarks:	45	7)	or the Model 35VQ25 Pump Test in accordance with ASTM D6973	or the Model 35VQ25 Pump Test in accordance with ASTM D6973. Either 7.1) or 7.2) procedures below are acceptable for the 35VQ25 Pump Test. 7.1) Continuous 150 hours test run with single test pump cartridge and pass the acceptance criteria. 7.2) Three of 50 hours tests run on the same candidate oil but with three test pump cartridges. Each test has to pass the acceptance criteria.
Form-2b-2	47	High-pressure Piston Pump Test ⁶⁾	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % +10
Form-2b-2 Remarks:	49	6)	or the Model A2F Pump Test in accordance with JCMAS P 045.	or the Model A2F Pump Test in accordance with JCMAS P 045. In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.
Form-2b-2 Remarks:	49	7)	or the Model 35VQ25 Pump Test in accordance with ASTM D6973	or the Model 35VQ25 Pump Test in accordance with ASTM D6973. Either 7.1) or 7.2) procedures below are acceptable for the 35VQ25 Pump Test. 7.1) Continuous 150 hours test run with single test pump cartridge and pass the acceptance criteria. 7.2) Three of 50 hours tests

				run on the same candidate oil but with three test pump cartridges. Each test has to pass the acceptance criteria.
Form-2c-2	50	Service Life Evaluation with Model A2F Pump	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % ⁷⁾ +10
Form-2c-2 Remarks:	51	7)	-	In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.
Form-2d-2	53	Service Life Evaluation with Model A2F Pump	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % ⁷⁾ +10
Form-2d-2 Remarks:	53	7)	-	In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.
Form-7a-2	63	High-pressure Piston Pump Test ⁶⁾	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % +10
Form-7a-2 Remarks	65	6)	or the Model A2F Pump Test in accordance with JCMAS P 045.	or the Model A2F Pump Test in accordance with JCMAS P 045. In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.
Form-7a-2 Remarks	65	7)	or the Model 35VQ25 Pump Test in accordance with ASTM D6973	or the Model 35VQ25 Pump Test in accordance with ASTM D6973. Either 7.1) or 7.2) procedures below are acceptable for the 35VQ25 Pump Test. 7.1) Continuous 150 hours test run with single test pump cartridge and pass the acceptance criteria. 7.2) Three of 50 hours tests run on the same candidate oil but with three test pump cartridges. Each test has to pass the acceptance criteria.

Form-7b-2	67	High-pressure Piston Pump Test ⁶⁾	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % +10
Form-7b-2 Remarks	69	6)	or the Model A2F Pump Test in accordance with JCMAS P 045.	or the Model A2F Pump Test in accordance with JCMAS P 045. In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.
Form-7b-2 Remarks	69	7)	or the Model 35VQ25 Pump Test in accordance with ASTM D6973	or the Model 35VQ25 Pump Test in accordance with ASTM D6973. Either 7.1) or 7.2) procedures below are acceptable for the 35VQ25 Pump Test. 7.1) Continuous 150 hours test run with single test pump cartridge and pass the acceptance criteria. 7.2) Three of 50 hours tests run on the same candidate oil but with three test pump cartridges. Each test has to pass the acceptance criteria.
Form-7c-2	71	Service Life Evaluation with Model A2F Pump	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % ⁷⁾ +10
Form-7c-2 Remarks	71	7)	-	In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.
Form-7d-2	74	Service Life Evaluation with Model A2F Pump	Viscosity Change (40 °C), % 10	Viscosity Change (40 °C), % ⁷⁾ +10
Form-7d-2 Remarks	74	7)	-	In the case of JCMAS P045, results of all evaluation items from every interim inspection until 500 hours shall be within the acceptance criteria.

Appendix 5

Formulation Read-Across Guidelines for Hydraulic Fluids for Construction Machinery

False

Table A: Allowable Read-across Ranges and Application

Item	Changes during product development		On-file reporting and submission (Base formulation)	Changes after on-filing	
	High-pressure pump tests ⁽¹⁾	Other tests		High-pressure pump tests ⁽¹⁾	Other tests
1. Change in base oils	Read-across is allowed within the range given in Table B	Required at each change		Read-across allowed within the range given in Table B	Required for each change
2. Changes in main performance additives	Read-across is allowed within the range given in Table C	Required at each change		Read-across allowed for original submitter only and within the range given in Table C	-
3. Changes in pour point depressants or foam inhibitors	Read-across is allowed	Required only for pour point and foaming tests		Read-across allowed	Required for pour point and foaming tests
4. Changes in viscosity grade	Read-across is allowed within the range given in Table D	Required at each change		Read-across allowed for original submitter only and within the range given in Table D	-

True

Table A: Allowable Read-across Ranges and Application

Item	Changes during product development		On-file reporting and submission (Base formulation)	Changes after on-filing	
	High-pressure pump tests ⁽¹⁾	Other tests		High-pressure pump tests ⁽¹⁾	Other tests
1. Change in base oils	Read-across is allowed within the range given in Table B	Required at each change		Read-across allowed within the range given in Table B	Required at each change
2. Changes in main performance additives	Read-across is allowed within the range given in Table C	Required at each change		Read-across allowed for original registrant only and within the range given in Table C	Required at each change
3. Changes in pour point depressants or foam inhibitors	Read-across is allowed	Required only for pour point and foaming tests		Read-across is allowed	Required only for pour point and foaming tests
4. Changes in viscosity grade	Read-across is allowed within the range given in Table D	Required at each change		Read-across allowed for original registrant only and within the range given in Table D	Required at each change