

UL 79B

STANDARD FOR SAFETY

Power-Operated Pumps for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil



JUNE 3, 2020 - UL 79B tr1

UL Standard for Safety for Power-Operated Pumps for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil, UL 79B

First Edition, Dated February 11, 2015

Summary of Topics

This revision of ANSI/UL 79B dated June 3, 2020 includes the addition of reference to UL 61800-5-1 as a replacement to UL 508C; 30.5.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The revised requirements are substantially in accordance with Proposal(s) on this subject dated March 20, 2020.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of UL.

UL provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will UL be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if UL or an authorized UL representative has been advised of the possibility of such damage. In no event shall UL's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL's Standards for Safety agree to defend, indemnify, and hold UL harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser's computer system.

tr2 JUNE 3, 2020 - UL 79B

No Text on This Page

This is a preview. Click here to purchase the full publication.

FEBRUARY 11, 2015

(Title Page Reprinted: June 3, 2020)



1

UL 79B

Standard for Power-Operated Pumps for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil

Prior to the first edition, the requirements for the products covered by this standard were included in the Outline of Investigation for Power-Operated Pumps for Diesel Fuel, Biodiesel Fuel, Diesel/Biodiesel Blends with Nominal Biodiesel Concentrations up to 20 Percent (B20), Kerosene, and Fuel Oil, UL 79B.

First Edition

February 11, 2015

This ANSI/UL Standard for Safety consists of the First Edition including revisions through June 3, 2020.

The most recent designation of ANSI/UL 79B as an American National Standard (ANSI) occurred on May 14, 2020. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at https://csds.ul.com.

UL's Standards for Safety are copyrighted by UL. Neither a printed nor electronic copy of a Standard should be altered in any way. All of UL's Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of UL.

COPYRIGHT © 2020 UNDERWRITERS LABORATORIES INC.

No Text on This Page

CONTENTS

INTRODUCTION

1	Scope	
2	General	
	2.1 Components	8
	2.2 Units of measurement	8
	2.3 Undated references	9
3	Glossary	
	,	•
CONST	RUCTION	
001101	ROUTION	
4	Assembly	10
5	Materials	
5		
	5.1 Metallic materials	
	5.2 Nonmetallic materials	
	5.3 Materials – system level	
	5.4 Casting impregnation materials	
	5.5 Internal parts	
6	Bodies, Covers, and Heads	
7	Drive-Shaft Seals	14
8	Diaphragms	15
9	Springs	15
10	Floats	15
11	Air Separators	
12	•	
13		
14		
15		
16	<u> </u>	
17		
18	, , ,	
19		
20	, , , , , , , , , , , , , , , , , , ,	
21		
22	, ,	
23	5	
24	Internal Wiring	26
	24.1 Mechanical protection	26
	24.2 Types of wire	26
	24.3 Splices and connections	27
25	Separation of Circuits	28
26	Capacitors	28
27	•	
	27.1 General	
	27.2 Grounding identification	
28	· ·	
20	28.1 Construction	
	28.2 Overload protection	
00	28.3 Brushes and brush holders	
29		
30		
31	Spacings	

PROTECTION OF PERSONNEL

32	General	
33	Sharp Edges	35
34	Enclosures and Guards	36
35	Materials	37
36	Surface Temperatures	37
37	Locking Mechanism	38
38	Control Application	38
39	Secondary Circuits	39
	39.1 General	39
	39.2 Protection of wiring	39
	· ·	
PERFOR	RMANCE	
40	General	39
41	Long Term Exposure Test	40
	41.1 General	
	41.2 Samples	
	41.3 Method	
	41.4 Results	
42	High Pressure Leakage Test	
43	Endurance Test – Pumps	
44	Hydrostatic Strength Test	
45	Retention Test for Screws and Bolts	
46	Deformation Test	
47	Leakage of Wire Seal Test	45
48	Endurance Test for Air Separators	46
49	Blocked Outlet Test	46
50	Pressure Relief Test	46
51	Float Buoyancy Test	46
52	Dimensional Stability of Floats Test	46
53	Weight Change of Floats Test	47
54	Float Crushing Test	47
55	Moist Ammonia-Air Stress Cracking Test	
56	Tests on Sealing Compounds	
57	Metallic Coating Thickness Test	
58	Starting Current Test	
59	Input Test	
60		
	60.1 General	
	60.2 Maximum normal load	
61	Dielectric Voltage-Withstand Test	
62	Grounding Continuity Test	
63	Rain Test	
64	Submersion Test	
65	Conductor Secureness Test	
66	Insulation Resistance Test	
67	Leakage Current Test	
68	Pneumatic Parts – Pressure Distortion Test	
69	Pneumatic Parts – Endurance	
70	Pneumatic Parts – Impact Test	64

MANUFA	ACTURING AND PRODUCTION	
71	General	64
INSTRU	CTIONS	
72	General	66
RATING		
73	Details	66
MARKIN	G	
74 75 76	General Cautionary Markings Permanence of Marking	68
SUPPLE	MENT SA – Test Fluids	
SA	Representative aggressive combustible test fuel mixtures	71