



SERVICE BULLETIN

Title: Oil Pump Motors and Overload Heaters
Models Affected: 17/19 CA/DK/DM/DR/EF/FA

Number: C9402
Date: 2/21/94
Supersedes:
Date:

Purpose:

To inform the field of new 17/19 series oil pump motor electrical ratings and subsequent replacement of overload heaters that may be required.

File: Controls–Wiring

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Background:

As of October, 1991, the supplier of all 17/19 series oil pump motors was changed. One motor (02XB05002301) now covers all horsepower, voltage, and frequency requirements. Likewise, electrical ratings, nameplates, and overload settings were revised. This new oil pump motor is rated for 1.5HP. It may be wired for 200-240V or 380-600V, 60HZ, or 220-240V or 310-440V, 50HZ.

When the motor parts (stator, rotor, housing, and miscellaneous hardware) were changed, the various oil pump and motor assembly part numbers remained the same.

Procedure:

New oil pump motor parts are not interchangeable with former motor parts. It must be determined whether an old or new oil pump motor is being dealt with before parts are ordered from RCD. The stator and rotor will be marked with Carrier part numbers as follows:

Old Rotor	Old Stator	New Rotor	New Stator
HD43JK321 Or HD53JK322	HD43JK231 Or HD43JK227 Or HD53JK236 Or HD53JK235	02XB05002401	02XB05002301

If it is determined that an old oil pump is currently installed, an entire assembly should be ordered since the housings are machined to accommodate the new motor.

Because the new motor is 1.5 HP, its electrical ratings are different than those of the former motor. As seen in the table on the following page, the previous motor's amp draw was stated in "full" load amps (FLA) for the listed chillers. The new motor's amp draw, however, is given in "rated" load amps (RLA). This implies that the FLA of the new motor will vary and be less than its RLA for the listed chillers.

With this in mind, realize that it may also be necessary to replace the oil pump starter overload heaters when an old oil pump motor is replaced with the new motor. Overload heater selections are made on the basis of motor nameplate RLA. To determine the required heater:

1. Find the appropriate oil pump and motor assembly part number in the following table, 'Oil Pump Motor Electrical Ratings'.
2. Move across to the appropriate electrical ratings for the new motor.
3. Enter the 'Oil Pump Starter Heater Selection Table' with the RLA obtained from above.
4. Choose the RLA closest to that found in step 2.
5. Move across to find the Carrier part number of the required heater.

Note: Part numbers exist for Cutler-Hammer starters only.

Oil Pump Motor Electrical Ratings

Oil Pump & Motor Assembly (RCD P/N)	Former Electrical Ratings				Current Ratings		
	Voltage	Hz	Hp	FLA	Voltage	Hz	RLA
19D32-841	220-208	60	0.5	1.8	200-240	60	4.77
	440-480	60	0.5	0.95	380-600	60	2.47
*19D34-841	550-600	60	0.5	0.76	VOIDED		
19D36-841	220-240	50	0.5	2.21	220-240	50	4.77
	380-415	50	0.5	0.91	310-440	50	3.11
19D37-841	550	60	0.5	0.67	NOW 19D32-841		
19EA511-223 (DR DUAL)	220-240	60	1.5	4.64	220-240	60	4.77
	380-440	50	1.5	2.67	380-600	60	2.47
19EA521-223 (DR DUAL)	220-240	50	1.5	5.61	220-240	50	4.77
	380-440	50	1.5	2.67	310-440	50	3.11
19EA531-223	550-600	60	1.5	1.82	VOIDED		
19DR660-001 (DR SINGLE)	200-240	60	0.5	1.8	200-240	60	4.77
	380-480	60	0.5	0.95	380-600	60	2.47
19DR660-002 (DR SINGLE)	220-240	50	0.5	2.04	220-240	50	4.77
	380-440	50	0.5	1.0	310-440	50	3.11
19DR660-003	550-600	60	0.5	0.76	VOIDED		
17FA101-222-1	220-208	60	1.5	5.2	200-240	60	4.77
17FA101-222-2	380-480	60	1.5	2.1	380-600	60	2.47
*17FA502-224	220-240	50	1.5	6.2	220-240	60	4.77
*17FA502-254	380-440	50	1.5	2.9	310-440	50	3.11
17FA502-240	550-600	60	1.5	2.1	VOIDED		
*17FA522-218	200-240	60	1.5	4.64	200-240	60	4.77
*17FA532-218	220-240	50	1.5	5.61	220-240	50	4.77
17FA542-218	380-480	60	1.5	2.35	380-240	50	4.77
*17FA552-218	550-600	60	1.5	1.82	VOIDED		
17FA562-218	380-440	50	1.5	2.67	310-440	50	3.11

Oil Pump Motor Electrical Ratings (Continued)

Oil Pump & Motor Assembly (RCD P/N)	Former Electrical Ratings				Current Ratings		
	Voltage	Hz	Hp	FLA	Voltage	Hz	RLA
17CA61-591 (RCD KIT)	208-220	60	0.5	1.91-1.92	310-440	50	3.11
	440	60	0.5	1.00	380-600	60	2.47
	380-415	50	0.5	1.20-1.92	310-440	50	3.11
17CA61-374	208-220	60	0.5	1.91-1.92	200-240	60	4.77
17CA63-374	440	60	0.5	1.00	380-600	60	2.47
17CA65-374	550	60	0.5	0.91	VOIDED		
*17CA67-374	380-415	50	0.5	1.20-1.25	330-440	50	3.11

*Not Set Up On C9 System

Oil Pump Starter Heater Selection Table

RLA	Ultimate Trip Amps (125% Of RLA)	Carrier Part Number	Cutler-Hammer Catalog Number	Nominal Resistance (OHMS +/-7.5% @ 20C)
0.67	0.84	HN71AZ843	H1014	3.31
0.91	1.14	HN71AZ846	H1017	1.83
1.01	1.26	HN71AZ847	H1018	1.23
1.41	1.76	HN71AZ848	H1021	0.626
1.78	2.23	HN71AZ850	H1023	0.403
2.21	2.76	HN71AZ852	H1025	0.268
2.47	3.09	HN71AZ853	H1026	0.236
3.82	4.78	HN71AZ855	H1029	0.114
4.77	5.96	HN71AZ856	H1030	0.0978
3.11	3.89	HN71AZ861	H1027	0.152

Note: These above specified heaters are to be used in conjunction with Cutler-Hammer starters only. Be sure they are installed such that they point to the 7:00 position.