YANMAR SERVICE NEWS

Subject	Standard Lube Oil Consumption of Yanmar Diesel Engines	No. : 16-2-G-02-023-M Date of Issue: Feb, 2017

Engine Model	All Models	Use	Marine Prop. & Aux.; Industrial
		Engine Nos.	———

The standard lube oil consumption of Yanmar diesel engines, produced by Amagasaki Plant, Yanmar Co., Ltd., was already informed to you in our service news, No.98-1-G-04-017-M, issued in 1998. Since the lineup of our new series engines, the EY series, has been completed recently, we, herewith, would like to add the standard lube oil consumption of the EY series as being the revised edition of the service news as follows:

In the Approval Drawing of the diesel engines produced by Yanmar's Amagasaki Plant, the standard lube oil consumption is shown in [g/kW･hr] at rated output. However, this standard representation may not be practical since diesel engines in most cases are used at some percentage loads in actual operation. In view of this, we have newly established the standard lube oil consumption per hour in [ℓ] , the standard commonly used by the market, by engine application (marine propulsion, marine aux. and cont. use industrial), that is, [ℓ/hr] , [ℓ/day] and [ℓ/month]. Here, please note that the standard lube oil consumptions, including the said new standard, **are not the guaranteed values and are for reference only.**
Concerning the calculation of lube oil consumption, it is generally calculated by the LO refill amount and the engine operation hours over that interval. However, the results can vary depending on the difference of the LO measuring method. In this relation, please note the following points for LO measurement:

1. Since the sump than stores much oil, the measurement of the oil level position must be accurate. In order to make the error of measurement as small as possible, make the engine operation hours for the measurement interval as long as possible. Make the interval more than 300 hours.
2. Refill lube oil to make the oil levels of the tank, before and after the measurement period, identical. Use that LO refill amount and calculate the LO consumption by the engine operation hours.
3. Consider the LO volume expansion and measure the oil level when the LO temperature is the same.
4. In the case of marine engines, measure the oil level, (by oil dipstick, etc.), when hull rolling and pitching are small, (upon anchorage, etc.) Measure several times, (5~6 times) and average the results for making the measuring error as small as possible.
5. The LO refilled to supplement the LO disposed of upon replacing LO in the sump tank is not the LO consumed by the engine. Do not include this LO quantity in the calculation of LO consumption.

YANMAR CO.,LTD.
Power Solution Business
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Approved	Checked	Prepared
		

Standard Lube Oil Consumption [Marine Propulsion]

Model	Stabilized Period		Maintenance Period	
	ℓ/hr	ℓ/month	ℓ/hr	ℓ/month
MF24	0.36	120	0.54	180
MF33	0.98	330	1.47	490
DY25	0.45	150	0.68	230
DY26	0.58	190	0.87	290
DY28	0.80	260	1.20	400
S165	0.40	130	0.60	200
6NA160	0.52	170	0.78	260
6N160	0.51	170	0.76	250
6N165	0.53	180	0.80	265
6N18A	0.67	220	1.00	330
M200	0.67	220	1.00	330
6N21A	0.87	290	1.30	430
8N21A	1.20	400	1.80	600
M220	0.80	260	1.20	400
T240	0.93	310	1.40	460
T250	1.13	380	1.70	570
T260	1.20	400	1.80	600
6N250	1.20	400	1.80	600
6N260	1.33	440	2.00	670
Z280	1.47	490	2.20	730
6N280	1.67	550	2.50	830
8N280	2.13	710	3.20	1070
6N330	2.33	780	3.50	1170
8N330	3.00	1000	4.50	1500
6RY17	0.65	220	1.0	330
6EY17	0.74	250	1.1	370
6EY22A	0.79	265	1.2	415
6EY26	1.06	355	1.7	565
8EY26	1.45	480	2.3	765
6EY33	2.05	680	3.2	1055
8EY33	2.77	920	4.3	1420

※Annual engine operation hours were assumed to be 4,000 hours and per month operation hours 333 hrs., (4,000hrs./12 months).

Standard Lube Oil Consumption [Marine Aux.]

Model	Stabilized Period ℓ/day		Maintenance Period ℓ/day	
	W/O Pinion Lub.	With Pinion Lub.	W/O Pinion Lub.	With Pinion Lub.
6NY16L	10	—	14	—
S165L	10	—	14	—
6N165L	12	—	17	—
S185L	9	14	13	18
S185DL	11	—	16	—
S185AL	11	—	16	—
6N18L	12	17	18	23
6N18AL	14	19	22	27
M200L	12	17	18	23
M200AL	14	19	22	27
6N21L	17	22	26	31
6N21AL	21	26	32	37
8N21L	21	28	32	38
8N21AL	28	34	42	48
M220L	16	21	24	29
M220AL	19	24	29	34
T240L	21	26	31	36
T260L	24	29	36	41
6N260L	29	34	43	48
Z280L	32	37	48	53
6N280L	38	43	56	61
8N280L	50	56	74	80
6N330L	51	56	77	82
8N330L	75	81	113	120
6EY18L	7	10	12	15
6EY18AL	10	13	16	19
6EY22L	16	19	25	28
6EY22AL	19	22	30	33
6EY26L	25	30	40	45
8EY26L	33	39	53	59
6EY33L	53	58	82	87
8EY33L	71	77	109	115

Standard Lube Oil Consumption [Industrial, Constant Use]

Model	Rated Speed [min^{-1}]	Stabilized Period		Maintenance Period	
		ℓ/hr	ℓ/day	ℓ/hr	ℓ/day
6NY16L	1,000	0.34	8	0.51	12
	1,200	0.43	10	0.64	15
S165L	1,000	0.34	8	0.51	12
	1,200	0.43	10	0.64	15
6NHL	1,500	0.50	12	0.75	18
	1,800	0.53	13	0.80	19
S185L	900～1,200	0.50	12	0.75	18
6N18AL	900 / 1,000	0.67	16	1.00	24
M200AL	900 / 1,000	0.67	16	1.00	24
M220L	750	0.80	19	1.20	29
M220AL	900	0.85	21	1.28	31
6N21AL	900 / 1,000	0.93	22	1.40	34
T240L	720 / 750	0.93	22	1.40	34
T260L	720 / 750	1.24	30	1.87	45
Z280L	720 / 750	1.56	38	2.35	56
8Z280L	720 / 750	2.13	51	3.20	77
6N260L	720 / 750	1.31	31	1.96	47
6N280L	720 / 750	1.82	44	2.73	66
8N280L	720 / 750	2.31	56	3.47	83
6N330L	720 / 750	2.59	62	3.88	93
8N330L	720 / 750	3.29	79	4.95	118
6EY18L	720 / 750	0.54	13	0.79	19
6EY22AL	900 / 1,000	0.92	22	1.38	33
6EY26L	720 / 750	1.25	30	1.88	45
8EY26L	720 / 750	16.3	39	2.46	59
6EY33L	720 / 750	24.2	58	3.63	87
8EY33L	720 / 750	3.20	77	4.79	115