

Registered Office & Factory :

Near Kalyan Mills, Naroda Road, Ahmedabad - 380 025. India
Tel. # 91-79-61700100, Customer Care Number : 9824200800
E-mail : indsales@lubipumps.com, Web : www.lubipumps.com

PERFORMANCE TEST CERTIFICATE

Date : Jan 21, 2022

Order No. : 19909

Reference :

Model : LCR10/18

Serial No. : 322808251,322808252

Suction Size : 40 mm

Discharge Size : 40 mm

DUTY POINT

Total Head (H) : 130 M

Discharge (Q) : 180 LPM

PUMP MATERIAL OF CONSTRUCTION

Head & Base : C.I

Assembly : SS 304

Shaft : SS 316

Sealing : Mechanical Seal

ELECTRIC MOTOR DETAILS

Make : LUBI

Eff. Class : IE2

Supply Voltage(V): 415

Power (P) : 7.5 K.W

RPM : 2900

Frequency(Hz) : 50

This is to certify that the above mentioned pumpset has been tested & the guaranteed duty point verified by our Quality Assurance Department.

Note:

For Lubi Industries LLP (DIV-5)



(Quality Assurance Engineer)

FQA31/REV01/01-2-2021

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Factory : (1) LUBI INDUSTRIES LLP DIV-01, DIV-02, Nr. Kalyan Mills, Naroda Road, Ahmedabad-380025 (INDIA)

(2) LUBI INDUSTRIES LLP DIV-03, B/h. Memco Bus stop, Naroda Road, Post : Saijpur Bogha, Ahmedabad-382345 (INDIA)

(3) LUBI INDUSTRIES LLP DIV-04, DIV-05, Lubi Industrial Park, Vadsar Khatraj Road, Vadsar-382721. Dist. Gandhinagar (INDIA)

Engine Performance Certificate

Date: 27/10/21

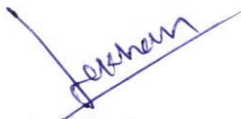
This is to certify that Engine Model EE683TCI with Engine Sr. No. **E611CDMK366961G** for Constant Speed Industrial application tested as per the Guidelines of IS10000.

The engine tested as per internal test processes, which meets the constant speed application requirements.

All performance parameters of engines in standard Test conditions and are conforming to Product Specifications.

The corrected Power of engine without auxiliaries is 77KW @ 1500 rpm.

For VE Commercial Vehicles Ltd.



Authorized signatory

www.vecv.in

VE Commercial Vehicles Limited
102, Industrial Area No. 1
Pithampur - 454 775
Distt. Dhar (M.P.), India

Telephone
+91 7292 402633

Fax
+91 7292 402611

Registered Office
CIN: U74900DL2008PLC175032
3rd Floor Select Citywalk
A-3, District Centre, Saket
New Delhi - 110 017, India



Enriching Lives

KIRLOSKAR OIL ENGINES LIMITED

A Kirloskar Group Company

ENGINE TEST CERTIFICATE

This is to certify that Kirloskar Engine Model KFP4R-UF16R1 bearing Serial No 4H.2806 / 2120117 has been tested as per SAE J1349 standard.

The full load power at N.T.P. condition is 105 B.H.P. @ 2800 RPM to 152 B.H.P @ 3000 RPM

Date: 30-NOV-2021


Quality Assurance

Engine output subject to site correction factor as applicable.

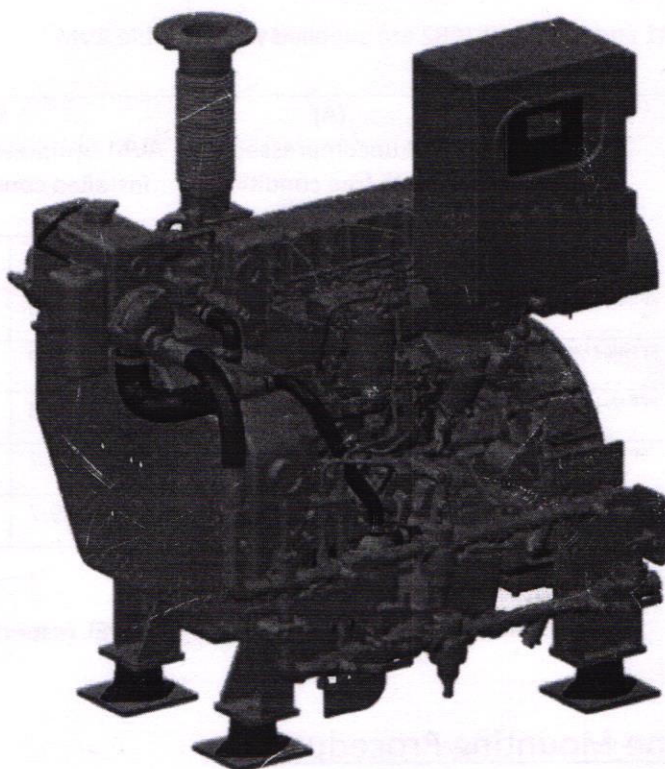
Regd. Office: Laxmanrao Kirloskar Road, Khadki, Pune - 411 003. INDIA. Tel. : +91 (20) 2581 0341(Board). Fax : +91 (20) 2581 3208, 2581 0209
email : global@kirloskar.com, Website : www.koel.co.in

ENGINE INSTALLATION GUIDELINES

KIRLOSKAR OIL ENGINES LTD

ENGINE MODELS

KFP4R-UF05, KFP4R-FM05D1,
KFP4R-UF08, KFP4R-UF16R1, KFP4R-UF16R2.



FIRE FIGHTING PUMP DRIVE ENGINES



KOEL PART NUMBER:-4H.1901.01.0.00

This document is general guidelines and instructions for the use of AVM along with KOEL UL and FM engine models, KFP4R-UF05, KFP4R-FM05D1, KFP4R-UF08, KFP4R-UF16R1 and KFP4R-UF16R2. To facilitate the pump manufacturer KOEL is supplying the AVM along with the engines. This document contains details of AVM for respective engine models. Pump manufacturer need to consider the details provided in this document while engine installation.

Anti-Vibration Mount (AVM) Details

Please refer the table no. 1 for the AVM installation and filled the values as per the procedure mentioned below. The KOEL engine models KFP4R-UF05, KFP4R-FM05D1, KFP4R-UF08, KFP4R-UF16R1 and KFP4R-UF16R2 are supplied with suitable AVM.

Sr. No.	Engine Model	(A) AVM uncompressed height in free condition (mm)				(B) AVM compressed height in installed condition (mm)				Difference (C) = (A) – (B)			
		AVM 1	AVM 2	AVM 3	AVM 4	AVM 1	AVM 2	AVM 3	AVM 4	AVM 1	AVM 2	AVM 3	AVM 4
01	KFP4R-UF05	62	62	62	62	59.8	59.9	59.9	59.8	2.2	2.1	2.1	2.2
02	KFP4R-FM05D1	62	62	62	62	59.8	59.9	59.9	59.8	2.2	2.1	2.1	2.2
03	KFP4R-UF08	62	62	62	62	59.7	59.8	59.8	59.7	2.3	2.2	2.2	2.3
04	KFP4R-UF16R1	62	62	62	62	59.6	59.7	59.7	59.6	2.4	2.3	2.3	2.4
05	KFP4R-UF16R2	62	62	62	62	59.6	59.7	59.7	59.6	2.4	2.3	2.3	2.4

Table No. 1 – AVM details for the KOEL respective engine models

Engine Mounting Procedure -

Following general guidelines, steps need to be followed while mounting the AVM on base and engine on AVM. The detail procedures for mounting the AVM and engine on base is as follow.....

- 1) Measure uncompressed height of all four AVM provided along with engines for the respective engine models (Refer Figure no 1) as in free condition and enter in Table No. 1 at column (A)
- 2) Mount the AVM on the base plate for the KOEL respective engine model as shown in Fig. 2
- 3) Insert the M12 X 1.75 X 25 mm length 8.8 grade bolt to fasten the AVM with base
- 4) Ensure all the four mounts are on its place on base and all fasteners are inserted before installing the engine on AVM as shown in Figure 2
- 5) Now mount the Engine on the AVM as shown in Figure no. 3

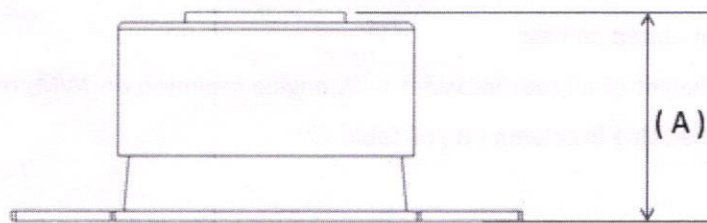


Figure 1 – Uncompressed height of AVM in free condition (A)

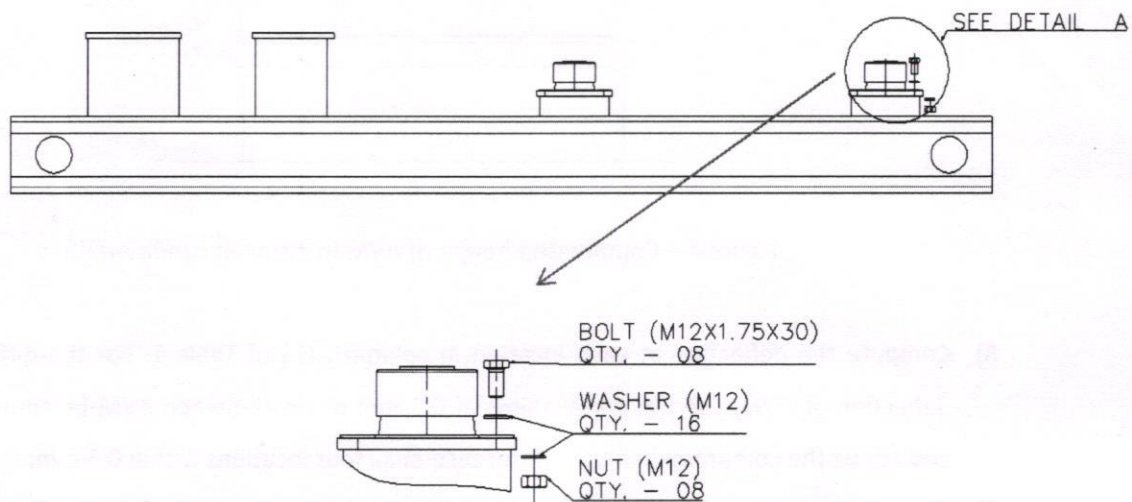


Figure 2 – AVM installation on base

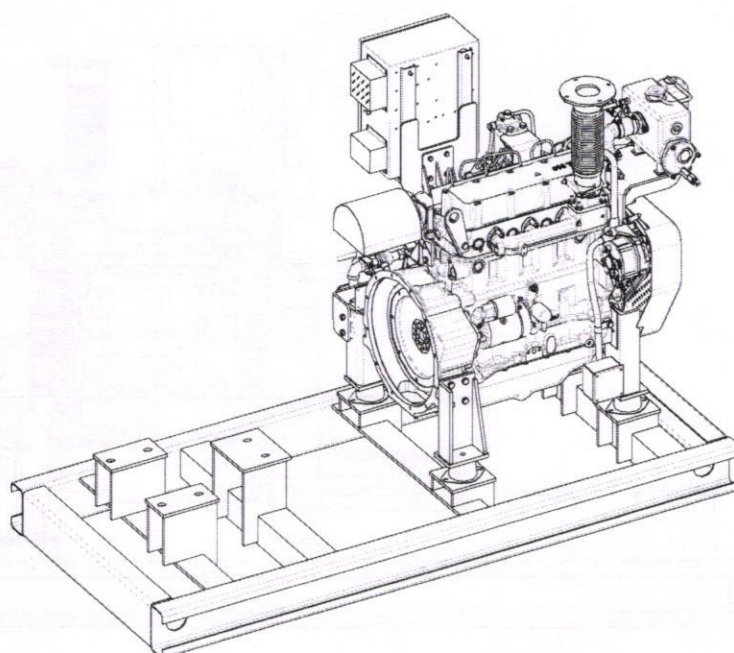


Figure 3 – Engine installation on AVM

- 6) Insert AVM centre bolt of M12 X 1.75 X 30 mm length into engine mounting foot ad centre hole of AVM mounted on base.
- 7) Measure the height of all four locations with engine mounted on AVM, refers the Figure 4 and entered the value in column (B) of Table 1.

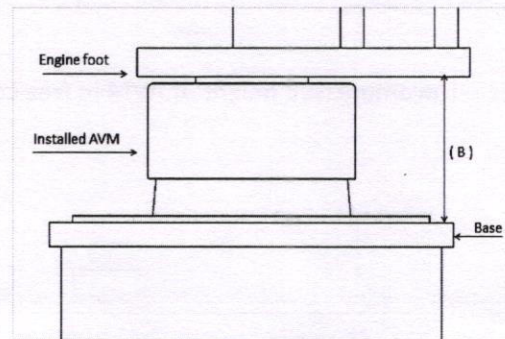


Figure 4 – Compressed height of AVM in installed condition (B)

- 8) Compute the deflection at each location in column (C) of Table 1. For the difference in deflection of AVM, use the metal shims of 0.5 mm or less between AVM bottom and base and adjust the compression height difference at all four locations within 0.5 mm.
- 9) Once the compressed height difference at all four locations is within 0.5 mm then apply the torque of 86.9 N-m to all AVM fastener and fasten the bolts to base.

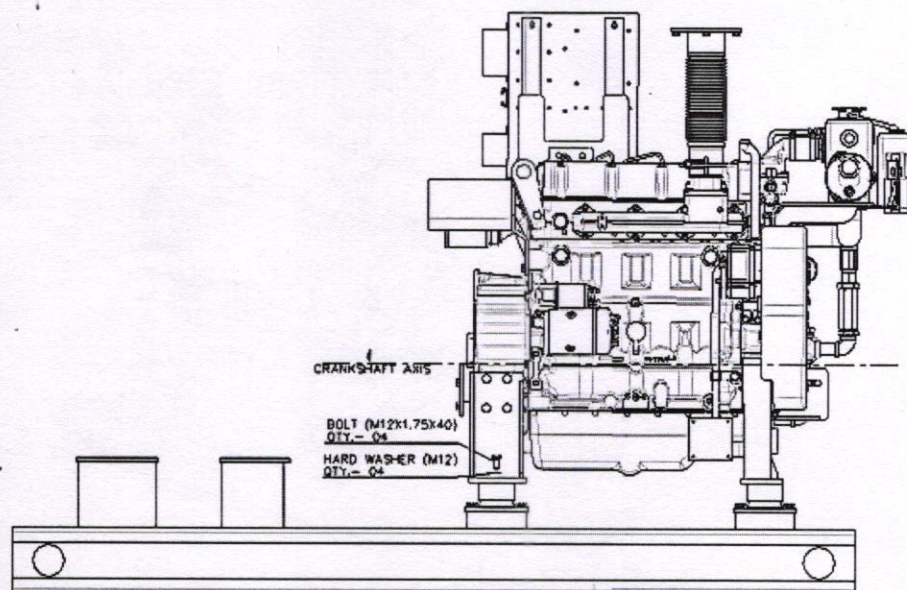


Figure 5 – Engine installation with AVM

- 10) Now the engine installation is completed and ready for the further assembly, Figure 5. For engine foundation please refer the engine installation for respective engine models. And other details please refer the Operation & Maintenance manual.

For coupling selection:

For coupling selection please provide the following data / information to the coupling manufacturer or supplier.

1. Over the life of equipment the engine crankshaft axis is going to set by further 1 mm
2. During start and stop of the engine following lateral movement values need to consider for the KOEL different engine models as mentioned in Table 2.

Sr. No.	KOEL Engine Model	Engine lateral displacement (mm)
1	KFP4R-UF05	1. Engine Start – 4.2 2. Engine Stop -3.8
2	KFP4R-FM05D1	1. Engine Start – 4.2 2. Engine Stop -3.8
3	KFP4R-UF08	1. Engine Start -4.2 2. Engine Stop -3.8
4	KFP4R-UF16R1	1. Engine Start -4.2 2. Engine Stop -3.8
5	KFP4R-UF16R2	1. Engine Start -4.2 2. Engine Stop -3.8

Table 2 – Engine lateral displacement