

Notes regarding the Operating Limits for Diesel Powered Davey Firefighters®

Your diesel engine has had the Governor set to allow for a maximum speed of 3000rpm. It can be altered to allow for a maximum speed of 3600rpm.

Please note that at the higher speed it may be possible to overload the engine, especially at high flow rates. Before changing the governor spring position you should consult your Davey dealer as to the safe operating limits.

Below are notes relevant to the available power from you diesel engine.

Maximum Power Ratings

The maximum hp ratings of the Yanmar engines we offer are as follows :

	3600rpm		3000rpm	
	Continuous hp rating	1 hour hp rating	Continuous hp rating	1 hour hp rating
L70 AE (7hp)	6.1	7.0	5.6	6.1
L100 AE (10hp)	9.0	10.0	7.9	8.8

Continuous hp rating : is the long term operation rating.

1 hour hp rating : is the maximum hp available for one hours operation in every twelve.

Deration Factors

Various factors effect the ability of a diesel engine to perform to its maximum. These factors are called the deration factors.

1. **Production Tolerance:** like any engine, a diesel engine will only perform to its best once it has been correctly run-in.
2. **Altitude & atmospheric pressure:** lower atmospheric pressure means less oxygen into the engine, which means less power.
Derate by 1.3% for every 100 metres of elevation above sea level.
3. **Atmospheric temperature:** as the temperature of the air taken in rises, its density decreases and thus the amount of oxygen available decreases.
Derate by 3% for every 10°C above 20°C.
4. **Humidity:** water vapor in the air displaces the available oxygen.
Derate according to the table.

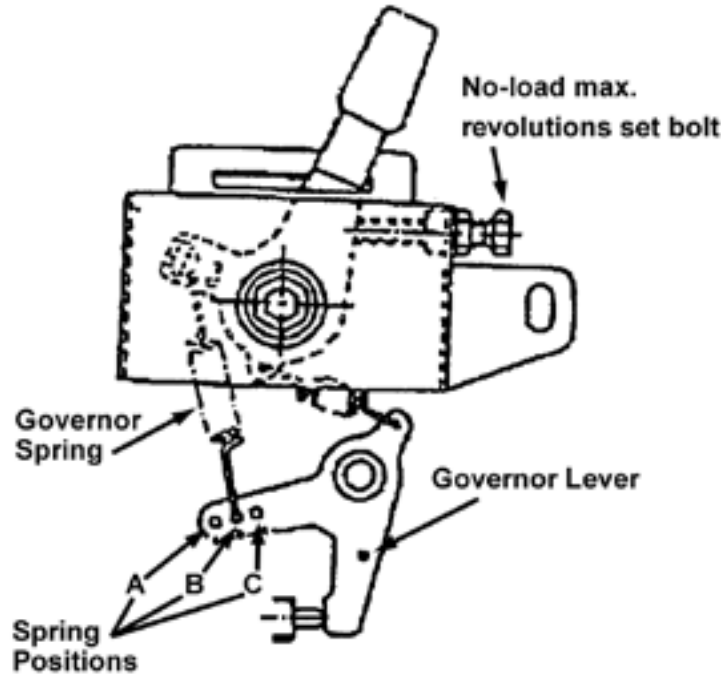
Relative Humidity (%)	Temperature of intake air (°C)			
	20	30	40	50
20	-	0.7	1.8	1.8
30	-	1.2	2.7	3.2
40	-	1.7	3.5	4.7
50	-	2.2	4.4	6.1
60	-	2.7	5.2	7.6
70	0.1	3.2	6.1	9.0
80	0.4	3.7	7.0	10.4
90	0.7	4.2	7.8	11.9
100	1.0	4.6	8.7	13.3

Maintenance Schedule


The Yanmar Installation & Operating Instructions contain the recommended maintenance schedule information. Adequate correctly rated oil and clean air are vital to the life of a diesel engine.

Adjusting Governor Speed Setting

Your diesel engine has had the Governor set to allow for a maximum speed of 3000 rpm. It can be altered to allow for a maximum speed of 3600 rpm.



Spring position "C" is that for 3000rpm governed speed.
Spring position "B" is that for 3600rpm governed speed.

 **NOTE: Continuous operation at full speed (3600rpm) and at low pressure / high flows will damage your engine and void your guarantee.**

Your Davey dealer can advise you on the operating limits for reliable service from your engine.

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Davey Water Products Pty Ltd
Member of the GUD Group
ABN 18 066 327 517
Head Office and Manufacturing
6 Lakeview Drive,
Scoresby, Australia 3179
Ph: +61 3 9730 9222
Fax: +61 3 9753 4100
Website: davey.com.au
Customer Service Centre
Ph: 1300 367 866
Fax: 1300 369 119
E-mail: sales@davey.com.au
Interstate Offices
Sydney • Brisbane • Adelaide
Perth • Townsville

International
6 Lakeview Drive,
Scoresby, Australia 3179
Ph: +61 3 9730 9121
Fax: +61 3 9753 4248
E-mail: export@davey.com.au

Germany
Kantstrasse 53,
04275 Leipzig
Ph: +49 341 301 0412
Fax: +49 341 301 0413
E-mail: akrenz@daveyeurope.com

New Zealand
2 Rothwell Avenue,
North Harbour, Auckland 1330
Ph: +64 9 914 3680
Fax: +64 9 914 3685
Website: daveynz.co.nz
E-mail: sales@daveynz.co.nz

USA - Davey Pumps Inc.
1005 N. Commons Drive
Aurora, Illinois 60504
Ph: +1 630 898 6976
Fax: +1 630 851 7744
Website: daveyusa.com
E-mail: sales@daveyusa.com