FI
Jan 2004

Performance Tests of Milking Machines

Countdown Downunder

Tested by ..... Countdown Performance Certificate No .....

Client ..... Date .....

Reason for test .....

Vacuum Recorder Brand..... Model .....

Last calibration check Date.....

- ☐ Channel 1 35 kPa ..... 45 kPa ..... 55 kPa .....
- ☐ Channel 2 35 kPa ..... 45 kPa ..... 55 kPa .....
- ☐ Extra test gauge (if used) 35 kPa ..... 45 kPa ..... 55 kPa .....

(not more than ± 0.5 kPa measured against reference mercury manometer)

Connection for vacuum recording

- ☐ T-piece
- ☐ Needle .....G
- ☐ Other.....

Response rate

..... kPa/sec
..... kPa/sec
..... kPa/sec

PERFORMANCE TEST SUMMARY

	Yes	Border-line	No	Comments
Compatible cluster components have been selected (liners fit shells and claw nipples)				
Cluster air admission is OK				
Cluster positioning and weight balance is OK				
Vacuum levels and differences meet standards and guidelines				
Mean claw vacuum meets the guidelines				
Vacuum stability in milkline and receiver meets the guidelines				

RECOMMENDATIONS

Considering the results of both the Dry Test and these Performance Tests:

☐ No further work or changes are necessary

☐ Further tests or milking time observations are required

Please specify .....

.....

.....

.....

☐ The following changes are recommended

Please specify .....

.....

.....

.....

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Performance Tests of Milking Machines

Countdown Downunder

Clusters Not during milking

No. clusters .....

☐ Parallel 80-90°
☐ Attach rear
☐ H'bone, attach side

Cluster position in relation to the cows' udders

Good / Fair / Poor

Claw type.....

Claw nipple size..... mm

Air vent size ..... mm

S/off valve leaks..... L/min

Air adm. range ..... L/min

Cluster air leaks..... L/min

Shell dimensions.....mm

(Length x Outer Diameter x Hole)

Liner brand..... Model no. .....

Short milk tube bore.....mm

Liner Condition

Age of liner ..... months Number of cow milkings .....

	Good	Fair	Poor
Mouthpiece distortion	☐	☐	☐
Barrel shape	☐	☐	☐

Abrasion on outside wall of liner ☐ No ☐ Yes

Rub marks on shell ☐ No ☐ Yes

	Current	New
Liner length unstretched (mm)	.....	.....
Liner stretch (%)	.....	.....

Ineffective length ..... mm Effective length ..... mm

Claw vacuum

Unit	Average claw vacuum (kPa)	
	During milking Avg at 90 - 120sec	**Flow Simulator At 5 L/min**
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Mean		

Pass/Fail guideline

Mean claw vacuum within range 36-42 kPa at 5 L/min with simulator; or 90 - 120 seconds after cups on

Pass/Fail

Vacuum levels and differences Not during milking

Milkline height High ☐ Mid ☐ Low ☐

Vacuum reading	Guidelines	Pass/ Fail
Working vacuum (WV) ..... kPa at central test point (ctp)	High line 47 - 50 kPa Mid line 45 - 48 kPa Low line 42 - 46 kPa	
Unit fall off test Level / Drop 1 unit .....kPa .....kPa 2 units .....kPa .....kPa	Not more than 2 kPa with one unit open (OR with two units open when there are more than 32 units in the shed)	
Regulator undershoot Level / Drop 1 unit .....kPa .....kPa 2 units .....kPa .....kPa	Not more than 2 kPa below min vacuum with one (or two) units open	
Regulator overshoot Level / Drop 1 unit .....kPa .....kPa 2 units .....kPa .....kPa	Not more than 2 kPa above max vacuum with no units open	
Vacuum change at reg or sensing point Reg vac with ctp at WV ..... kPa Reg vac with ctp at (WV-2) .....kPa Change at regulator .....kPa	A change of 1.3 kPa or more at regulator when receiver vacuum is dropped by 2kPa	

Vacuum stability in milkline and receiver

During milking

	Vacuum reading (kPa)		Not more than a 2 kPa transient vacuum drop for 95% of the total milking time	
	Avg	**Min**	**Drop** Avg - Min	**Pass/ Fail**
Milkline vacuum level with all or most units connected				
Receiver vacuum level during cluster changeover	1.			
	2.			

Technician .....

Date.....

Client.....