



N.M.C.
NATIONAL MASTITIS COUNCIL

MILKING SYSTEM EVALUATION FORM

Sample

DAIRY OPERATOR: _____ PHONE: _____ DATE: _____

ADDRESS: _____ DEALER: _____

DAIRY OPERATORS CONCERNS: _____

OF COWS : _____ AVERAGE HERD MILK PRODUCTION: _____ SCC: _____

MILKING SYSTEM:
HIGHLINE: LOWLINE: SINGLE LOOP: DOUBLE LOOP: MILKLINE SIZE: _____ IN. PULSATOR LINE SIZE: _____ IN.
MILKLINE SLOPE: _____ IN./10 FEET CONTINUOUS.

VACUUM PUMP MODEL: _____ HP: _____ NUMBER OF MILKING UNITS USED: _____

1. SYSTEM VACUUM DIFFERENCES (Circle differences which exceed guidelines)	VACUUM (" Hg) AT:				
	RECEIVER (Rec Vac)	REGULATOR (Or sensor, if remote)	VACUUM PUMP (PIV)	PULSATOR AIRLINE (Far End)	FARM VACUUM GAUGE
1a) Cups Plugged					
b) One Milking Unit Open (Mimic Fall Off)					
c) Two Milking Units Open (Mimic 2 Fall Offs with 32 units or more)					

AIRFLOW MEASUREMENTS

TYPE OF MEASUREMENT	AS FOUND	RETEST AFTER ANY CHANGES		GUIDELINES OR COMMENTS
2a) EFFECTIVE RESERVE (Measured at 0.6" Hg below Rec Vac)				
b) MANUAL RESERVE (Measured at 0.6" Hg below Rec Vac).		2c) Regulation Efficiency ER / MR = %	2d) Vacuum Change at Regulator or Sensor "Hg	2c) At least 90% Regulation Efficiency 2d) At least 0.4"Hg Vacuum Change
3) AIR USED BY COMPONENTS (Measured at Rec Vac)	AFM READING	AIR USED	RETEST AFTER ANY CHANGES	
a) AFM READING (System at normal operating level and regulator disconnected)				
b) PULSATORS				Typically 0.75 - 1.5 CFM per unit
c) MILKING UNITS				Typically 0.3 - 0.5 CFM per unit
d) REGULATOR				
e) OTHER OR TOTAL				3f) PIV = _____ "Hg
4) VACUUM PUMP(S)	PUMP 1	PUMP 2	PUMP 3	
a) CAPACITY @ 15" Hg (Measured at pump inlet)				RATED CAPACITY: Compare with MMMC pump tables
b) CAPACITY AT PUMP INLET VACUUM (PIV) Vacuum at Pump Inlet (Step 3f) _____ "Hg				Pump capacity should meet current ASAE standards
	AS FOUND	PERCENT OF 4b	RETEST AFTER ANY CHANGES	
5) SYSTEM LEAKAGE (4b minus AFM reading after 3d or 3e)				Maximum of 10% pump capacity at pump inlet vacuum (4b)

6) RECHECK EFFECTIVE RESERVE Rec Vac _____ "Hg Eff Res. _____ CFM
Note: This is done to assure the milking system is reconnected correctly and operating properly. This is simply a safety check

7. STATIC PULSATION TESTS (Circle any figures outside guidelines)

PULSATOR NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RATIO All within 5%																
A PHASE %																
B PHASE At least 30%																
C PHASE ms or %																
D PHASE At least 15% &/or 150 ms																
RATE (Within 3 puls- es/min)																
Comments (Attach graphs as necessary)																
Volts at box: Max. _____ Min. _____ Last Pulsator: Max. _____ Min. _____ Others: Max. _____ Min. _____																

8. DYNAMIC TESTS

a) Vacuum in Milkline (with all milking units milking)	Vacuum Fluctuations _____ "Hg	Less than 0.6" Hg desirable
b) Vacuum Fluctuations in Receiver (If necessary)	_____ "Hg	Less than 0.6" Hg desirable
c) Dynamic Test / Cow #		
Avg. Full Load Vacuum		10.5 - 12.5" Hg
Vacuum Fluctuations		Less than 2" - 3" Hg desirable
Pulsator Ratio under Full Milking Load		Within 5% of Static Pulsator Ratio

9. RECOMMENDATIONS: PRIORITIES / CHANGES

PRIORITY NUMBER	

ACCEPTANCE BY OWNER

The undersigned each acknowledge that the above described milking system was analyzed on the _____ day of _____ 19____ and each agrees that the results are, to the best of their knowledge, correctly described above.

_____ Dairyman/Owner

_____ Dealer/Technician