SARGENT IRRIGATION CO.

Efficiency Test Report

Electric Motor

Name Giesbrecht Living Trust Address Legal SE 26-13-34 Lincoln Co.

Lattitude: 41 ° 03 ' 56.4 " Longitude: 101 ° 10 ' 45.3 "

Elevation Date 9/21/2026

Well Depth: Casing Dia: Yr.Inst.: Bowls: 7-12CH

Pump Mfg. WLR SN: 8205710 Col: 220?? ft. 8 5/8 x 2 1/2 x 1 1/2

Drive Mfg.: U.S RUSI HP: 100 SN: L08-BF66-MD10004 Ratio:

Sprinkler: Zimmatic Type: Nozzled for: GPM@ PSI:

Static Water Level: 196

	Pump RPM		PSI	x	2.31	=	ft.	+	Pumping Level	+	Pump Loss	=	Total Hd. Ft	x	Flow GPM	/	3960	=	Water HP
1	1788		24	x	2.31	=	55.44	+	212	+	5	=	272.4	x	575	/	3960	=	39.6
2				x	2.31	=	0	+		+		=		x		/	3960	=	
3	1788		25	x	2.31	=	57.75	+	213	+	5	=	275.8	x	605	/	3960	=	42.1

Electric 3 Phase: Meter# Meter Multiplier Frame # 404TP

Full Load Amps 114 Volts w/Motor Off 492 Rated RPM: 1785

	KWH/h	/	0.746	=	Hook UP Horse Power
1	0	/	0.746	=	
2	0	/	0.746	=	
3	0	/	0.746	=	

	Volts	x	AMPS	x	1.732	/	1000	x	Power Factor	=	KWH/H	=	1.34	x	Efficiency Factor	-	Thrust Loss	=	Pump HP
1	485.6	x	96.3	x	1.732	/	1000	x	0.85	=	69	=	1.34	x	0.92	-		=	85.1
2		x		x	1.732	/	1000	x		=		=	1.34	x		-		=	
3	488.1	x	96.11	x	1.732	/	1000	x	0.85	=	69	=	1.34	x	0.92	-		=	85.1

Pump Efficiency:

	Water HP	/	Pump HP	=	Pump Efficiency
1	39.6	/	85.1	=	46.5 %
2	0	/	0	=	0 %
3	42.1	/	85.1	=	49.5 %

Bowl Efficiency:

	Pump HP	-	Lineshaft Loss	=	Bowl HP	Water HP	-	Bowl HP	=	Efficiency
1	85.1	-	3	=	82.1	39.6	-	82.1	=	48.2
2		-		=			-		=	
3	85.1	-	3	=	82.1	42.1	-	82.1	=	51.3

Comments:

Approx. 35' 8" lead in pipe, pivot on and running, end gun off towards road.

Motor sounds ok. Very, very slight cascading water 200' down.

Pump sounds ok.

Test #1 Original impeller setting 3 3/4 turns after clear.

Test #2 Lowered impellers to 3 turns max, left there.

4-1-1999

Nozzled for 644.49 GPM

35 PSI

105.79 end gun

043009