

7030 Ryburn Dr. Millington, TN Pho

Phone: (901) 873-5300

Fax: (901) 873-5301

www.gohispeed.com

February 28, 2021

NUCOR Melt Shop Subject: February 2021 vibration survey

Most of the machines surveyed were found to be in good condition except for the following:

QualiTest® uses a four-step rating system for defects.

<u>Class I:</u> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

<u>Class II:</u> Defect (s) present that may cause problem in long term (2-6 months). Repair during normal maintenance scheduling. Continue to monitor.

<u>Class III</u>; Defect (s) present that may cause failure in short term (less than 2 months). This should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.

<u>Class IV</u>; Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs

Hi-Speed Industrial Service tests and inspects industrial machinery and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information contained herein is provided as an opinion only, not as a guaranty or warranty of the matters discussed herein.

Defects

West Caster Mold Water Pump

High 1 x rpm vibration is present in the motor axial. This indicates angular misalignment. Motor and pump may also have some internal wear. Perform a precision alignment with less than .003" offset and angularity. Ensure there is no soft foot present in the motor. Rated as a **CLASS II** defect.

East Caster Mold Water Pump

Pump is still showing some signs of internal wear. Coupling may also be wearing due to misalignment. Perform a precision alignment with less than .003" offset and angularity. Ensure there is no soft foot present. Rated as a **CLASS** I defect.

West Booster Pump

Pump data shows another increase in non-synchronous vibration at the outboard end of the pump. This is good indication of bearing defects taking place in the pump bearings. Pump will need attention SOON. Rated as a **CLASS III** defect.

Cooling Tower #2 Supply Pump

The pump appears to have cavitation which is causing a high noise floor in the spectrum. This is also making the ODE pump bearing have high acceleration. This could also be a bearing issues, but the noise floor is masking the data somewhat. Pump impeller or other pump internals may also be worn which could be causing this vibration. Pump needs to be inspected as time allows. Rated as a **CLASS II** defect.

Cooling Tower #3 Supply Pump

The pump appears to have cavitation which is causing a high noise floor in the spectrum. This is also making the ODE pump bearing have high acceleration. This could also be a bearing issues, but the noise floor is masking the data somewhat. Pump impeller or other pump internals could also be worn which could be causing this vibration. Pump needs to be inspected as time allows. Rated as a **CLASS II** defect.

Cooling Tower #6 Supply Pump

The pump vibration data is still indicating that there is bearing wear, and possibly cavitation in the pump. Inspect ODE pump bearing SOON. Ensure the pump has no inlet restrictions and is operating in the correct part of the curve. Rated as a **CLASS II** defect.

Middle 2nd Deck Hyd. Pump

Unit was not in service this month; however, the following likely still applies: Pump data indicates internal wear of the hydraulic pump. Ensure coupling is good as well. Rated as a **CLASS II** defect.

Spray Chamber Exhaust Fan

Fan vibration is lower this survey; however, issues still exist. Outboard fan bearing is showing signs of defects/wear. Inspect fan bearings especially the ODE fan bearing for defects and proper lubrication. This unit is very likely operating near a critical speed and is resonant which is likely influencing the high vibration in the motor and fan. It is recommended to replace the fan and fan shaft assembly as downtime allows. Fan has excessive build up and fan shaft is possibly bent and or worn. We will continue to monitor this closely. Rated as a **CLASS III** defect.

West Furnace Baghouse Fan

Fan data continues to show an uprise in fan speed vibration that is likely due to imbalance of the fan wheel. Overall vibration at the inboard horizontal is .19 ips-pk this month. On average, it is .1 ips-pk. There has also been an uptick in high frequency vibration which most appears to be possible lubrication issue. Ensure grease is adequate and clean. Rated as a **CLASS II** defect.

Station: Melt Shop

MEASUREMEN	r point		OVERALI	LEVEL	HFD	/ VHFD
WCMWP	- WEST	CASTER MOLD	WATER	PUMP	(24-Feb-2	1)
			OVERAI	L LEVEL	1K-2	0KHz
MOH			.144	In/Sec	. 98	6 G-s
MIH			.141	In/Sec	2.17	6 G-s
MIA			.150	In/Sec	1.04	4 G-s
PIA			.221	In/Sec	1.13	5 G-s
PIH			.153	In/Sec	.96	0 G-s
РОН			.165	In/Sec	. 93	7 G-s
ECMWP	- EAST	CASTER MOLD	WATER	PUMP	(24-Feb-2	1)
			OVERAI	L LEVEL	1K-2	OKHz
MOH			.101	In/Sec	.21	0 G-s
MIH			.073	In/Sec	.26	7 G-s
MIA			.439	In/Sec	.24	4 G-s
PIA			.435	In/Sec	1.10	1 G-s
PIH			.299	In/Sec	.72	ZG-S
POH			.217	In/Sec	1.01	9 G-s
EBOSTRP	- EAST	Booster PUM	P		(24-Feb-2	1)
			OVERAI	L LEVEL	1K-2	OKHz
MOH			.070	In/Sec	.28	0 G-s
MIH			.067	In/Sec	.25	2 G-s
MIA			.043	In/Sec	.21	9 G-s
PIA			.069	In/Sec	.08	7 G-s
PIH			.064	In/Sec	.06	0 G-s
POH			.054	In/Sec	.11	2 G-s
ECSWP 1LFT	- EAST	CASTER SPRA	Y WP 1	LEFT	(24-Feb-2	1)
			OVERAI	L LEVEL	1K-2	OKHz
MOH			.276	In/Sec	. 49	7 G-s
MIH			.221	In/Sec	1.00	8 G-s
MIA			.137	In/Sec	.23	4 G-s
MCSWP 3RT	- MID C	CASTER SPRAY	WP 3 F	RIGHT	(24-Feb-2	1)
			OVERAI	L LEVEL	1K-2	OKHz
MOH			.174	In/Sec	.38	3 G-s
MIH			.098	In/Sec	. 47	1 G-s
MIA			.099	In/Sec	.86	8 G-s
WCSWP 4RT	- WEST	CASTER SPRA	Y WP 4	RIGH	(24-Feb-2	1)
			OVERAI	L LEVEL	1K-2	OKHz
MOH			.184	In/Sec	1.09	7 G-s
MIH			.115	In/Sec	. 67	5 G-s
MIA			.111	In/Sec	.78	0 G-s
ESERVOHYDP	- EAST	SERVO Hyd P	UMP		(24-Feb-2	1)
			OVERAI	L LEVEL	1K-2	OKHz
MOH			.023	In/Sec	.17	0 G-s
MIH			.046	In/Sec	.31	5 G-s
PIV			.158	In/Sec	. 69	1 G-s
WSERVOHYDP	- WEST	SERVO Hyd P	UMP		(24-Feb-2	1)
		_	OVERAI	L LEVEL	1K-2	0KHz
MOH			.134	In/Sec	.23	9 G-s
MIH			.074	In/Sec	. 35	8 G-s

F	PIV		.113	In/Sec	1.563 G-s
SEDVOHDE	- CD	SERVO Hud I	PECTRC DIMP		$(24 - F_{0} - 21)$
Shiriona	101	bilitio nya i	OVERAL	LL LEVEL	1K-20KHz
M	ЮН		.052	In/Sec	.050 G-s
M	1 IH		.049	In/Sec	.392 G-s
F	2IV		.095	In/Sec	.391 G-s
				•	
N2DECKHY	DP -	North 2ND	DECK Hyd PUM	P	(24-Feb-21)
			OVERA	LL LEVEL	1K-20KHz
M	10H		.111	In/Sec	2.002 G-s
M	1IH		.218	In/Sec	3.490 G-s
E	PIV		.222	In/Sec	9.984 G-s
ODEVDECT		OND DECK I	C H-d DECTD		(24 Eab 21)
ZDERRECI	LP -	ZND DECK L	OVERAL	LT. LEVET.	1K-20KH-7
N	ЮН		079	In/Sec	396 G-s
M	4IH		.151	In/Sec	.621 G-s
F	PIV		.323	In/Sec	2.842 G-s
				•	
S2DECKHY	DP -	SOUTH 2ND	DECK Hyd PUM	P	(24-Feb-21)
			OVERA	LL LEVEL	1K-20KHz
M	10H		.097	In/Sec	.500 G-s
M	1 IH		.094	In/Sec	.468 G-s
E	PIV		.130	In/Sec	1.664 G-s
1SUPLYP	_	#1 Supply	Pump		(24-Feb-21)
		" <u>-</u>	OVERA	LL LEVEL	1K-20KHz
M	10H		.050	In/Sec	.236 G-s
M	1IH		.062	In/Sec	.168 G-s
M	4IA		.073	In/Sec	.174 G-s
F	PIA		.204	In/Sec	.184 G-s
F	PIH		.168	In/Sec	1.005 G-s
E	POH		.192	In/Sec	1.353 G-s
ACTIDIVD	_	#4 Supply	Pump.		(24-Fob-21)
4SUPLYP	-	#4 Supply	Pump	I.T. T.EVET.	(24-Feb-21) 1K-20KHz
4SUPLYP	- 10H	#4 Supply 3	Pump OVERAI	LL LEVEL	(24-Feb-21) 1K-20KHz .347 G-s
4SUPLYP M	– 10H 11H	#4 Supply 3	Pump OVERA1 .035 .044	LL LEVEL In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s
4SUPLYP M M M	- 40H 4IH 4IA	#4 Supply :	Pump OVERA .035 .044 .047	LL LEVEL In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s
4SUPLYP M M F	- 40H 41H 41A 21A	#4 Supply :	Pump OVERAJ .035 .044 .047 .169	LL LEVEL In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s
4SUPLYP M M P F F	- 40H 4IH 4IA 2IA 2IH	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s
4SUPLYP M M F F F F	- 40H 41H 41A 21A 21H 20H	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s
4SUPLYP M M E E E	- 40H 41H 41A 21A 21H 20H	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s
4SUPLYP M M F F F 5SUPLYP	- AOH AIH AIA PIA PIH POH -	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz
4SUPLYP M M F F 5SUPLYP	- 40H 41H 41A 21A 21H 20H -	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ 032	LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz 540 G-s
4SUPLYP M M F F 5SUPLYP M	- 40H 41H 41A 21A 21H 20H - 40H	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041	LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s 499 G-s
4SUPLYP M M F F F 5SUPLYP M M M	- 40H 41H 41A 21A 21H 20H - 40H 41H 41A	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064	LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .499 G-s .203 G-s
4SUPLYP M M F F F 5SUPLYP M M M F	- 40H 41H 41A 21A 21H 20H - 40H 41H 41A 21A	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .499 G-s .203 G-s .123 G-s
4SUPLYP M M F F F 5SUPLYP M M M F F	- 40H 41H 41A 21A 21H 20H - 40H 41H 41A 21A 21A 21H	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .499 G-s .203 G-s .123 G-s .916 G-s
4SUPLYP M M F F F 5SUPLYP M M M F F F F	- 40H 41H 41A 21A 21H 20H - 40H 41H 41A 21A 21H 20H	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .499 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s
4SUPLYP M M F F F 5SUPLYP M M F F F F	AOH AIH AIA PIA POH AOH AIH AIA PIA POH	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .499 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s
4SUPLYP M M F F 5SUPLYP M M M F F F	AOH AIH AIA PIA PIH POH AIH AIA PIA PIH POH	#4 Supply :	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .499 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s
4SUPLYP M M F F 5SUPLYP M M F F F 6SUPLYP	AOH AIH AIA PIA PIH POH AIH AIA PIA PIH POH -	<pre>#4 Supply : #5 Supply : #6 Supply :</pre>	Pump OVERAI .035 .044 .047 .169 .138 .159 Pump OVERAI .032 .041 .064 .181 .150 .193 Pump	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21)
4SUPLYP M M F F 5SUPLYP 6SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply :</pre>	Pump OVERAI .035 .044 .047 .169 .138 .159 Pump OVERAI .032 .041 .064 .181 .150 .193 Pump OVERAI	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .20KHz .20KHz .205 G-5
4SUPLYP M M F F 5SUPLYP 6SUPLYP M M M F F F F 6SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply :</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump OVERAJ .044 .044	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s
4SUPLYP M M F F 5SUPLYP 6SUPLYP M 6SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply :</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump OVERAJ .044 .063 .074	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s
4SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply :</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump OVERAJ .044 .193	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s
4SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply :</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump Pump OVERAJ .044 .063 .074 .044 .063 .074	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s .204 G-s
4SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply :</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .041 .064 .181 .150 .193 Pump OVERAJ .044 .063 .074 .044 .063 .074 .190 .209 .218	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s .549 G-s 1.160 G-s
4SUPLYP M M F F F 5SUPLYP 6SUPLYP 6SUPLYP M M M F F F F F F	AOH AIH AIA PIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIA POH AIH AIA POH POH AIA POH POH AIA POH POH POH POH POH POH POH POH POH POH	<pre>#4 Supply : #5 Supply : #6 Supply :</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .032 .041 .064 .181 .150 .193 Pump Pump OVERAJ .044 .193 .044 .063 .074 .190 .209 .218	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s .549 G-s 1.160 G-s
4SUPLYP M M F F F 5SUPLYP 6SUPLYP 6SUPLYP M M M F F F F CBRA	AOH AIH AIA PIA POH AIH AIA PIA POH AIH AIA PIA POH AIH AIA PIA PIA PIA PIA PIA PIA PIA PIA PIA	<pre>#4 Supply : #5 Supply : #6 Supply : CASTER BAG</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump OVERAJ .044 .183 .150 .193 Pump OVERAJ .044 .063 .074 .190 .209 .218 HOUSE REVERSJ	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s .549 G-s 1.160 G-s (24-Feb-21)
4SUPLYP	AOH AIH AIA PIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIH AIA POH AIA AIA POH AIA AIA POH AIA AIA AIA AIA AIA AIA AIA AIA AIA AI	<pre>#4 Supply : #5 Supply : #6 Supply : CASTER BAGE</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump OVERAJ .044 .063 .074 .044 .063 .074 .190 .209 .218 HOUSE REVERSJ	LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s .549 G-s 1.160 G-s (24-Feb-21) 1K-20KHz .204 G-s .204 G-s .2
4SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply : CASTER BAGE</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump OVERAJ .044 .063 .074 .044 .063 .074 .190 .209 .218 HOUSE REVERSJ OVERAJ	LL LEVEL In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s 1.160 G-s (24-Feb-21) 1K-20KHz .344 G-s .344 G-s
4SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply : CASTER BAG</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump OVERAJ .044 .063 .074 .044 .063 .074 .190 .209 .218 HOUSE REVERSJ OVERAJ	LL LEVEL In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s 1.160 G-s (24-Feb-21) 1K-20KHz .344 G-s .254 G-s .254 G-s .254 G-s
4SUPLYP		<pre>#4 Supply : #5 Supply : #6 Supply : CASTER BAG</pre>	Pump OVERAJ .035 .044 .047 .169 .138 .159 Pump OVERAJ .032 .041 .064 .181 .150 .193 Pump OVERAJ .044 .063 .074 .044 .063 .074 .190 .209 .218 HOUSE REVERSJ OVERAJ	LL LEVEL In/Sec	(24-Feb-21) 1K-20KHz .347 G-s .524 G-s .764 G-s .144 G-s .514 G-s .597 G-s (24-Feb-21) 1K-20KHz .540 G-s .203 G-s .123 G-s .916 G-s 1.010 G-s (24-Feb-21) 1K-20KHz .196 G-s .168 G-s .144 G-s .204 G-s .549 G-s 1.160 G-s (24-Feb-21) 1K-20KHz .344 G-s .254 G-s .254 G-s .254 G-s .254 G-s .254 G-s .254 G-s

CBID		-	CASTER	BAGHOUSE	ID FAN		(24-Feb-21)
					OVERA	LL LEVEL	1K-20KHz
	MOH				.064	In/Sec	.067 G-s
	MOV				.030	In/Sec	.143 G-s
	MIH				.071	In/Sec	.117 G-s
	MIV				.046	In/Sec	.165 G-s
	MIA				.030	In/Sec	.178 G-s
	FIA				.093	In/Sec	.778 G-S
	E TU				.110		1.200 G-S
	FOH				130	In/Sec	.705 G S
	FOV				.035	In/Sec	1.043 G-s
	FOA				.041	In/Sec	.474 G-s
						,	
FRAF		-	Furnace	REVERSE	AIR Far	n	(24-Feb-21)
					OVERA	LL LEVEL	1K-20KHz
	MOH				.034	In/Sec	.289 G-s
	MIH				.044	In/Sec	.101 G-s
	MIA				.028	In/Sec	.152 G-s
	FIA				.023	In/Sec	.348 G-s
	FIH				.028	In/Sec	1.176 G-s
	FOH				.031	In/Sec	.181 G-s
	FOV				.017	In/Sec	.623 G-s
	F.TA				.014	In/Sec	.930 G-s
тнятя		_	East Fr	Irnace Ba	HOUSE	Fan	(24-Feb-21)
HE DITE			Bast Ft	iinace bay	OVERAI	I.I. LEVEL	1K-20KHz
	мон				.057	In/Sec	.465 G-s
	MIH				.060	In/Sec	.525 G-s
	MIA				.032	In/Sec	.246 G-s
	FIA				.069	In/Sec	.702 G-s
	FIH				.063	In/Sec	.613 G-s
	FOH				.083	In/Sec	2.278 G-s
WFBHF		-	WEST Fu	irnace Bag	g House	Fan	(24-Feb-21)
WFBHF		-	WEST FU	irnace Bag	g House OVERAL	Fan LL LEVEL	(24-Feb-21) 1K-20KHz
WFBHF	мон	-	WEST FU	irnace Bag	g House OVERAL .120	Fan LL LEVEL In/Sec	(24-Feb-21) 1K-20KHz .377 G-s
WFBHF	MOH MIH	-	WEST Fi	irnace Baq	y House OVERAL .120 .144	Fan LL LEVEL In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s
WFBHF	MOH MIH MIA	-	WEST Fi	irnace Baq	y House OVERAN .120 .144 .140	Fan LL LEVEL In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s
WFBHF	MOH MIH MIA FIA	-	WEST Fi	irnace Bag	y House OVERAL .120 .144 .140 .102	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2 297 C-s
WFBHF	MOH MIH MIA FIA FIH FOH	-	WEST FU	irnace Bag	g House OVERAL .120 .144 .140 .102 .207 175	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1 127 G-s
WFBHF	MOH MIH FIA FIH FOH	-	WEST FU	irnace Bag	g House OVERAJ .120 .144 .140 .102 .207 .175	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s
WFBHF	MOH MIH FIA FIH FOH	-	WEST FU	CASTER H	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21)
WFBHF	MOH MIH FIA FIH FOH	-	WEST FU	CASTER H	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz
WFBHF MIDCHY	MOH MIH MIA FIA FIH FOH DP MOH	-	WEST FU	CASTER H	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ .084	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s
WFBHF	MOH MIH MIA FIA FIH FOH DP MOH MIH	-	WEST FU	CASTER H	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ .084 .055	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s
WFBHF	MOH MIH FIA FIH FOH DP MOH MIH PIH	-	WEST FU	CASTER H	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ .084 .055 .157	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s
WFBHF	MOH MIH FIA FIH FOH DP MOH MIH PIH	-	WEST FU	CASTER H	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ .084 .055 .157	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s
WFBHF	MOH MIH FIA FIH FOH DP MOH MIH PIH	-	WEST FU	CASTER Hy	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ .084 .055 .157	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21)
WFBHF MIDCHY SCHYDP	MOH MIH MIA FIA FIH FOH DP MOH MIH PIH	-	WEST FU	CASTER Hy	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz
WFBHF	MOH MIH FIA FIH FOH DP MOH MIH PIH	-	WEST FU	CASTER Hy	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s
WFBHF	MOH MIH MIA FIA FIH FOH DP MOH MIH PIH	-	WEST FU	CASTER Hy	g House OVERAJ .120 .144 .140 .102 .207 .175 yd PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s
WFBHF MIDCHY SCHYDP	MOH MIH FIA FIH FOH DP MOH MIH PIH	-	WEST FU	CASTER Hy	<pre>g House</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s
WFBHF MIDCHY SCHYDP	MOH MIH FIA FIH FOH DP MOH MIH PIH MOH MIH PIH	-	WEST FU	CASTER Hy	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 vd PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21)
WFBHF MIDCHY SCHYDP	MOH MIH FIA FIH FOH DP MOH MIH PIH MOH MIH PIH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 vd PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST 1 OVERAJ</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH N MOH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER E	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST I OVERAJ 1.138</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz .042 G-s
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH MIA FIA FOH DP MOH MIH PIH N MOH MIH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER E	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST I OVERAJ 1.138 1.042</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH N MOH MIH MIH MIA	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER E	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST I OVERAJ 1.138 1.042 .738</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s .118 G-s
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH N MOH MIH MIH MIA FIH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER E	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST I OVERAJ 1.138 1.042 .738 .746</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s .118 G-s .427 G-s
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH N MOH MIH FIH FOH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER EX	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST J OVERAJ 1.138 1.042 .738 .746 .574</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s .118 G-s .427 G-s .361 G-s
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH N MOH MIH FIH FOH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER E	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST I OVERAJ 1.138 1.042 .738 .746 .574</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s .118 G-s .427 G-s .361 G-s
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH MOH MIH PIH N MOH MIH MIA FIH FOH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER EX	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST I OVERAJ 1.138 1.042 .738 .746 .574</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s .118 G-s .427 G-s .361 G-s (24-Feb-21)
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH MOH MIH PIH N MOH MIH FIH FOH HYDP	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER EX	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST 1 OVERAJ 1.138 1.042 .738 .746 .574</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s .118 G-s .427 G-s .361 G-s (24-Feb-21) 1K-20KHz .042 G-s
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH MOH MIH FIH FOH HYDP MOH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER EX	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .087 KHAUST I OVERAJ 1.138 1.042 .738 .746 .574 PUMP OVERAJ .087</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .319 G-s .242 G-s .459 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s .118 G-s .427 G-s .361 G-s (24-Feb-21) 1K-20KHz .050 G-s
WFBHF MIDCHY SCHYDP SCEXFA	MOH MIH FIA FIH FOH DP MOH MIH PIH MOH MIH FIH FOH HYDP MOH MIH	-	WEST FU	CASTER Hy CASTER Hy CASTER Hy CHAMBER EX	<pre>g House OVERAJ .120 .144 .140 .102 .207 .175 d PUMP OVERAJ .084 .055 .157 d PUMP OVERAJ .049 .031 .087 KHAUST I OVERAJ 1.138 1.042 .738 .746 .574 PUMP OVERAJ .087</pre>	Fan LL LEVEL In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec In/Sec	(24-Feb-21) 1K-20KHz .377 G-s .277 G-s .382 G-s .883 G-s 2.297 G-s 1.127 G-s (24-Feb-21) 1K-20KHz .343 G-s .368 G-s .559 G-s (24-Feb-21) 1K-20KHz .042 G-s .073 G-s .118 G-s .427 G-s .361 G-s (24-Feb-21) 1K-20KHz .050 G-s .056 G-s .72 C-5

NC OC	ILLA -	North	Caster	Oscillator	2	(24-Feb-21)		
				OVERAI	L LEVEL	1K-201	(Hz	
	MOH			.296	In/Sec	.142	G-s	
	MIH			.246	In/Sec	.135	G-s	
	MIA			.184	In/Sec	.193	G-s	
	GIA			.168	In/Sec	.186	G-s	
	GIH			.201	In/Sec	.718	G-s	
	GOH			.198	In/Sec	.405	G-s	
MC OC	CILLA -	Middle	e Caste	r Oscillato	or	(24-Feb-21))	
				OVERAI	L LEVEL	1K-201	ΚHz	
	MOH			. 333	In/Sec	.090	G-s	
	MIH			.268	In/Sec	.164	G-s	
	MIA			.185	In/Sec	. 536	G-s	
	GIA			.138	In/Sec	.081	G-s	
	GIH			.181	In/Sec	.387	G-s	
	GOH			.199	In/Sec	.101	G-s	
SC OC	CILLA -	South	Caster	Oscillator	5	(24-Feb-21))	
				OVERAI	LL LEVEL	1K-201	ΚHz	
	MOH			.190	In/Sec	.174	G-s	
	MIH			.170	In/Sec	.084	G-s	
	MIA			.136	In/Sec	.467	G-s	
	GIA			.096	In/Sec	.100	G-s	
	GIH			.164	In/Sec	. 729	G-s	
	GOH			.157	In/Sec	1.136	G-s	
Clarific	ation Of	Vibra	ation U	nits:				
Acc	>	G-s	RM	S				
Vel	>	In/Se	ec PK					

As always, it has been a pleasure to serve NUCOR Steel Flowood-Jackson, MS. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

Kerin W. Maxwell

ISO Certified Vibration Analyst, Category III



QualiTest Diagnostics Cell: 901-486-4565 Email: <u>kwilliam@gohispeed.com</u>