Ground / Jumper Assembly Tester Catalog No. 6714

WARNINGS

- 1) Do not use this tester until all instructions have been read and understood.
- 2) If either of the circuit breakers have tripped, (the on/off switch is the second circuit breaker) verify the voltage control is in the zero position prior to resetting. If the breakers will not reset, or operate a second time, remove the tester from service until repairs can be made.
- 3) Do not try to test any equipment other than ground or jumper assemblies with this tester.
- 4) Do not attach or use any other electrode with this tester as it will change the resistance of the tester.
- 5) Do not exceed the charted voltage during a test as excessively high currents will result.
- 6) Do not lay cable on or near a conductive table or surface during tests.
- 7) Do not operate the tester above 105 percent. (See Item 12 under OPERATION)

Failure to observe these warnings could result in inaccurate readings or damage to the tester.

OPERATION

- 1) Install the electrode through the tester and secure in place with the nuts supplied. HAND TIGHTEN ONLY.
- 2) Connect the tester to a grounded 110 volt source.
- 3) Measure the length of the cable. The length measured should be from the outer end of one ferrule to the outer end of the second ferrule. If testing a cable assembled to Mechanical Jumper Clamps or Load Pick-Up Tools, see Fig. 1 and Fig. 2 (page 4) to determine how to measure for length of the cable.
- 4) Attach the clamps and cable to be tested to the test electrode one clamp on each side.

- 5) Position the cable to eliminate any coils, twists, or overlaps of the cable. Try to maintain 12 inches between the cable ends. See Fig. 3 on page 4.
- 6) MAKE SURE THE VOLTAGE CONTROL IS SET TO ZERO PRIOR TO SWITCHING THE TESTER ON.
- 7) Locate the page that corresponds to the size (diameter) of cable being tested.
- 8) Locate the length of the cable being tested by using the feet dimension at the side of the chart and the inch dimension at the top of the chart.
- 9) Determine the input voltage by the intersection of the (inch) column and the (feet) row. Example: A 6 ft 3 in. No. 2 cable would require an input voltage of 29.1. If testing the Load Pick Up Tool, Ball Socket Clamps, or A10015 URD Switch Clamps, see page 4 for adjustments to the input voltage.
- 10) Switch the tester on.
- 11) Turn the voltage control until the correct voltage is shown on the digital readout of the voltmeter.
- 12) Read the ammeter. It should indicate 100 percent. Readings higher than 105 percent may indicate the wrong voltage was chosen. Immediately reduce the voltage and check for the correct input voltage. Readings lower than 95 percent indicate higher resistance than normal and additional investigation is required.

TEST RESULTS

If the reading obtained is less than 95 percent, the jumper should be separated from the clamps and the connections between the clamps and cable cleaned. While a visual inspection of this connection is NOT reliable, a visual inspection of the rest of the assembly should be performed

This should include inspection for

- 1) "knotting" of the cable,
- 2) broken strands below the clamp,
- 3) missing or loose cable retaining hardware,
- 4) damaged, bent, corroded, or stiff eye screws, or
- 5) any other missing or damaged parts on the clamp or cable. All defects must be corrected and the assembly re-tested before returning the unit to service.

Slight variations may be detected between jumpers in good condition which have different clamps attached. This is due to the difference in resistance of the clamps, and will be most noticeable between clamps made from different metals. This difference should not be assumed to be an indication of a difference in the quality or capacity of the clamps.

The readings obtained may vary slightly if the length of the cable is not exactly the same as listed in the chart.

A digital voltmeter can be used to evaluate each individual connection in the jumper assembly and determine which connection may be making the jumper fail. With the jumper still connected to the 6714, increase the INPUT VOLTAGE until a 100 percent reading is obtained on the PERCENT meter. This will require an input voltage above the charted value. Do NOT exceed 100 percent. Use the two probes of an A.C. millivoltmeter and measure the voltage drop across the various connections, i.e. from the cable to the ferrule, from the ferrule to the clamp, from the clamp body to the test bar, etc. Any two connected parts that the current must flow through represent a potential area for a bad connection. A good connection will measure approximately 5 millivolts. Readings from 0 to 10 milli-volts are acceptable. Bad connections will be much higher, with readings of 100 milli-volts or more possible.

Testing Hastings 21362 Truck Ground Reels w/cable installed

- 1) Select a short jumper that will be used to go from the ground rod on the Ground Reel to the test bar on the Tester. Test this jumper per previous operation instructions. It is not necessary that this jumper be the same diameter cable as what is on the Ground Reel. Record the voltage used to test this jumper.
- 2) Pull all of the cable off of the reel and measure the cable from the outer end of the ferrule to where the cable enters the drum of the Ground Reel. Add 9" (length of cable inside of the reel) to this measurement and determine the input voltage from the corresponding chart* for cable size and length. Record this voltage.
- 3) Add 31.5 volts for the Ground Reel.
- 4) Add these three voltages together for the input voltage to use on the Tester.
- 5) When the total input voltage exceeds 130 volts, divide the total input voltage by 2. Use this value for your total input voltage (ex. 188.0 V \div 2 = 94 V). Since the input voltage was divided by 2, the acceptable percentage range must also be divided by 2, changing the range from 95%-105% to 47.5%-52.5%.

Example Calculations:

Example Calculations:	
<u>Step 1:</u>	<u>Voltage</u>
Length of Short Jumper	
8' of 1/0 cable	28.2 V
<u>Step 2:</u>	
Length of Cable on Reel	
$39' \ 3'' + 9'' = 40' \ of \ 1/0 \ cable$	128.3 V
<u>Step 3:</u>	
Add voltage for Ground Reel	31.5 V
<u>Step 4:</u>	
Add voltages together to get	
input voltage	188.0 V
<u>Step 5:</u>	
Input voltage exceeds 130 V, ÷ by 2	
$188.0 \text{ V} \div 2 = 94.0 \text{ V}$	94.0 V

*You can use different sections of the charts for voltages for your jumper and the cable on the Ground Reel. If you use a section of the chart that uses a reduced reading for the percent meter (ex. #2 cable, 31' to 60', the ideal reading on the percent meter is reduced to 50%), you must use a multiplier for the voltage. Multiply the volts by 2 for the 50% chart, and by 2.5 for the 40% chart. Step 2 on the following example calculation uses the 50% chart for #2 cable.

Step 1:	<u>Voltage</u>
Length of Short jumper	
8' of 1/0 cable	28.2 V
Step 2:	
Length of Cable on Reel	
39'3'' + 9'' = 40' of #2 cable	
84.7 V X 2	169.4 V
Step 3:	
Add voltage for Ground Reel	31.5 V
Step 4:	
Add voltages together to get	
input voltage	229.1 V
Step 5:	
Input voltage exceeds 130 V, ÷ by 2	
$229.1 \div 2 = 114.6 \text{ V}$	114.6 V

- 6) Assemble one end of the jumper to the rod on the Ground Reel and the other end of the jumper to one side of the test bar on the Tester.
- 7) Attach the free end of the cable (from the Ground Reel) to the free end of the test bar on the Tester.
- 8) Position the cable to eliminate any coils, twists, or overlaps of the cable. Try to maintain 12 inches between the cable ends. See Fig. 3 on page 4.
- 9) MAKE SURE THE VOLTAGE CONTROL IS SET TO ZERO PRIOR TO SWITCHING THE TESTER ON.

- 10) Switch the tester on.
- 11) Turn the voltage control until the correct voltage is shown on the digital readout of the voltmeter.
- 12) Read the ammeter. It should indicate 100 percent. Readings higher than 105 percent may indicate the wrong voltage was chosen. Immediately reduce the voltage and check for the correct input voltage. Readings lower than 95 percent indicate higher resistance than normal and additional investigation is required.

Testing Hastings 21366 Truck Ground Reels w/cable installed

- 1) Select a short jumper that will be used to go from the ground rod on the Ground Reel to the test bar on the Tester. Test this jumper per previous operation instructions. It is not necessary that this jumper be the same diameter cable as what is on the Ground Reel. Record the voltage used to test this jumper.
- 2) Pull all of the cable off of the reel and measure the cable from the outer end of the ferrule to where the cable enters the drum of the Ground Reel. Add 9" (length of cable inside of the reel) to this measurement and determine the input voltage from the corresponding chart* for cable size and length. Record this voltage.
- 3) Add 38.6 volts for the Ground Reel.
- 4) Add these three voltages together for the input voltage to use on the Tester.
- 5) When the total input voltage exceeds 130 volts, divide the total input voltage by 2. Use this value for your total input voltage (ex. 188.0 V \div 2 = 94 V). Since the input voltage was divided by 2, the acceptable percentage range must also be divided by 2, changing the range from 95%-105% to 47.5%-52.5%.

Example Calculations:

Example Calculations:	
<u>Step 1:</u>	<u>Voltage</u>
Length of Short Jumper	
8' of 1/0 cable	28.2 V
<u>Step 2:</u>	
Length of Cable on Reel	
$39' \ 3'' + 9'' = 40' \ of \ 1/0 \ cable$	128.3 V
<u>Step 3:</u>	
Add voltage for Ground Reel	38.6 V
<u>Step 4:</u>	
Add voltages together to get	
input voltage	195.1 V
Step 5:	
Input voltage exceeds 130 V, ÷ by 2	
$195.1 \text{ V} \div 2 = 97.6 \text{ V}$	97.6 V

*You can use different sections of the charts for voltages for your jumper and the cable on the Ground Reel. If you use a section of the chart that uses a reduced reading for the percent meter (ex. #2 cable, 31' to 60', the ideal reading on the percent meter is reduced to 50%), you must use a multiplier for the voltage. Multiply the volts by 2 for the 50% chart, and by 2.5 for the 40% chart. Step 2 on the following example calculation uses the 50% chart for #2 cable.

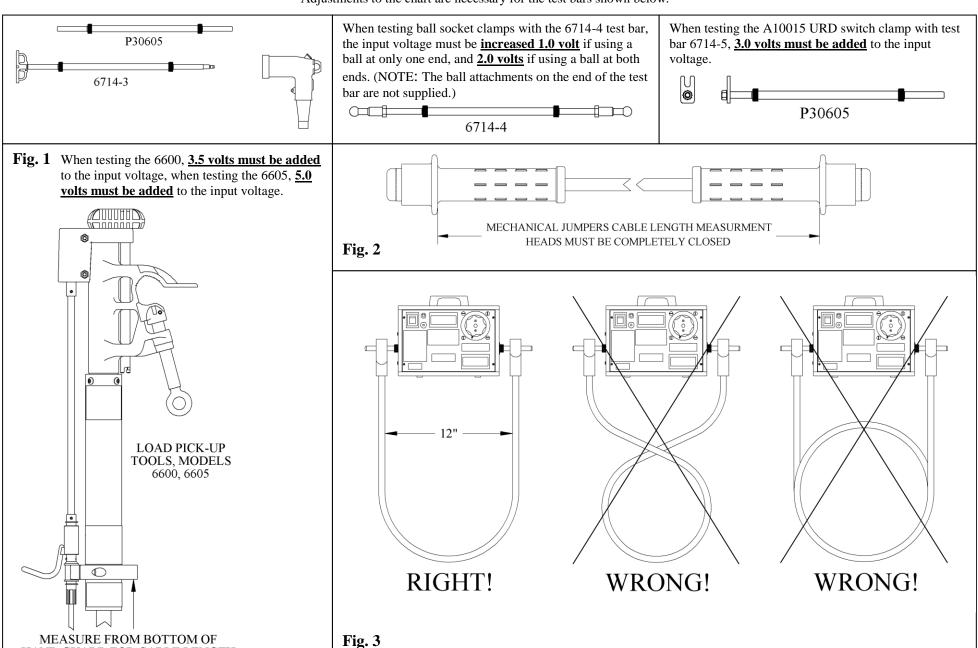
T	
<u>Step 1:</u>	<u>Voltage</u>
Length of Short jumper	
8' of 1/0 cable	28.2 V
Step 2:	
Length of Cable on Reel	
$39' \ 3'' + 9'' = 40' \ of \#2 \ cable$	
84.7 V X 2	169.4 V
Step 3:	
Add voltage for Ground Reel	38.6 V
<u>Step 4:</u>	
Add voltages together to get	
input voltage	236.2 V
<u>Step 5:</u>	
Input voltage exceeds 130 V, ÷ by 2	
$236.2 \text{ V} \div 2 = 118.1 \text{ V}$	118.1 V

- 6) Assemble one end of the jumper to the rod on the Ground Reel and the other end of the jumper to one side of the test bar on the Tester.
- 7) Attach the free end of the cable (from the Ground Reel) to the free end of the test bar on the Tester.
- 8) Position the cable to eliminate any coils, twists, or overlaps of the cable. Try to maintain 12 inches between the cable ends. See Fig. 3 on page 4.
- 9) MAKE SURE THE VOLTAGE CONTROL IS SET TO ZERO PRIOR TO SWITCHING THE TESTER ON.

- 10) Switch the tester on.
- 11) Turn the voltage control until the correct voltage is shown on the digital readout of the voltmeter.
- 12) Read the ammeter. It should indicate 100 percent. Readings higher than 105 percent may indicate the wrong voltage was chosen. Immediately reduce the voltage and check for the correct input voltage. Readings lower than 95 percent indicate higher resistance than normal and additional investigation is required.

The attached charts are for use with the standard test bar (P30605), and with the underground elbow test bar (6714-3)

Adjustments to the chart are necessary for the test bars shown below.



HAND GUARD FOR CABLE LENGTH

VOLTAGE INPUT SETTINGS #2 CABLE

103.4 103.6

105.7

107.8

109.7 109.9 110.0

105.5

107.6

50

51

103.8

105.9

108.0

104.0 104.1 104.3

108.1 108.3 108.5

110.2 110.4 110.5

106.4

106.0 106.2

104.5 104.7

108.6 108.8

106.7

110.7 110.9 111.1

106.6

104.8

106.9

109.0

105.0

107.1

109.2 109.3

105.2

107.3

111.2 111.4 111.6

105.4

107.4

109.5

					#2	CABI	LE						53	111.8	1 111.9	112.1	3 112.3	4 112.5	5 112.6	6 112.8	113.0	8 113.1	9 113.3	10 113.5	11 113.7
			FOR U	SE WITH				S PRODU	JCTS				54	113.8	114.0	114.2	114.4	114.5	114.7	114.9	115.1	115.2	115.4	115.6	115.7
						4 TESTE							55	115.9	116.1	116.3	116.4	116.6	116.8	117.0	117.1	117.3	117.5	117.7	117.8
					Septer	nber 20,	1993						56	118.0	118.2	118.3	118.5	118.7	118.9	119.0	119.2	119.4	119.6	119.7	119.9
FEET			NCHES										57	120.1	120.3	120.4	120.6	120.8	120.9	121.1	121.3	121.5	121.6	121.8	122.0
FEET		1"	2	3	4	5	6	7	8	9	10	11	58 59	122.2 124.2	122.3 124.4	122.5 124.6	122.7 124.8	122.8 124.9	123.0 125.1	123.2 125.3	123.4 125.4	123.5 125.6	123.7 125.8	123.9 126.0	124.1 126.1
3	15.6	16.0	16.3	16.7	17.0	17.4	17.7	18.0	18.4	18.7	19.1	19.4	60	126.3	126.5	124.0	124.8	124.9	127.2	127.4	127.5	127.7	127.9	128.0	128.2
4	19.8	20.1	20.5	20.8	21.2	21.5	21.9	22.2	22.6	22.9	23.2	23.6	•												
5	23.9	24.3	24.6	25.0	25.3	25.7	26.0	26.4	26.7	27.1	27.4	27.8			FROM 6	1 TO 75	FEET, TI	HE IDEAI	L READI	NG ON T	HE PERC	ENT ME	TER IS		
6	28.1	28.4	28.8	29.1	29.5	29.8	30.2	30.5	30.9	31.2	31.6	31.9						•			ED RESI				
7 8	32.3 36.4	32.6 36.8	32.9 37.1	33.3 37.5	33.6 37.8	34.0 38.1	34.3 38.5	34.7 38.8	35.0 39.2	35.4 39.5	35.7 39.9	36.1 40.2			JUN	IPERS A	ND THE	LIMITED	OUTPUT	T VOLTA	GE OF T	HE TEST	ER.		
9	40.6	40.9	41.3	41.6	42.0	42.3	42.7	43.0	43.3	43.7	44.0	44.4						40	PERCE	uT.					
10	44.7	45.1	45.4	45.8	46.1	46.5	46.8	47.2	47.5	47.8	48.2	48.5	FEET		IN	ICHES		40	· LIVOLI	••					
11	48.9	49.2	49.6	49.9	50.3	50.6	51.0	51.3	51.7	52.0	52.4	52.7			1	2	3	4	5	6	7	8	9	10	11
12	53.0	53.4	53.7	54.1	54.4	54.8	55.1	55.5	55.8	56.2	56.5	56.9	61	102.7	102.9	103.0	103.1	103.3	103.4	103.5	103.7	103.8	104.0	104.1	104.2
13	57.2	57.6 61.7	57.9	58.2	58.6	58.9	59.3	59.6 63.8	60.0 64.1	60.3	60.7	61.0	62	104.4	104.5	104.7	104.8	104.9	105.1	105.2	105.3	105.5	105.6	105.8	105.9
14 15	61.4 65.5	65.9	62.1 66.2	62.4 66.6	62.7 66.9	63.1 67.3	63.4 67.6	63.6 67.9	68.3	64.5 68.6	64.8 69.0	65.2 69.3	63	106.0 107.7	106.2 107.8	106.3 108.0	106.5 108.1	106.6 108.3	106.7 108.4	106.9 108.5	107.0 108.7	107.2 108.8	107.3 109.0	107.4 109.1	107.6 109.2
16	69.7	70.0	70.4	70.7	71.1	71.4	71.8	72.1	72.4	72.8	73.1	73.5	64 65	107.7	107.8	108.0	108.1	108.3	110.4	110.5	110.7	110.5	1109.0	1109.1	1109.2
17	73.8	74.2	74.5	74.9	75.2	75.6	75.9	76.3	76.6	77.0	77.3	77.6	66	111.0	111.2	111.3	111.4	111.6	111.7	111.9	112.0	112.1	112.3	112.4	112.6
18	78.0	78.3	78.7	79.0	79.4	79.7	80.1	80.4	80.8	81.1	81.5	81.8	67	112.7	112.8	113.0	113.1	113.2	113.4	113.5	113.7	113.8	113.9	114.1	114.2
19	82.2	82.5	82.8	83.2	83.5	83.9	84.2	84.6	84.9	85.3	85.6	86.0	68	114.4	114.5	114.6	114.8	114.9	115.1	115.2	115.3	115.5	115.6	115.7	115.9
20 21	86.3 90.5	86.7 90.8	87.0 91.2	87.3 91.5	87.7 91.9	88.0 92.2	88.4 92.5	88.7 92.9	89.1 93.2	89.4 93.6	89.8 93.9	90.1 94.3	69	116.0	116.2	116.3	116.4	116.6	116.7	116.9	117.0	117.1	117.3	117.4	117.5
22	94.6	95.0	95.3	95.7	96.0	92.2 96.4	96.7	97.1	93.2 97.4	93.6 97.7	93.9 98.1	94.3 98.4	70 71	117.7 119.3	117.8 119.5	118.0 119.6	118.1 119.8	118.2 119.9	118.4 120.0	118.5 120.2	118.7 120.3	118.8 120.5	118.9 120.6	119.1 120.7	119.2 120.9
23	98.8	99.1	99.5	99.8	100.2	100.5	100.9	101.2	101.6	101.9	102.2	102.6	72	121.0	121.1	121.3	121.4	121.6	121.7	121.8	120.3	120.3	122.3	122.4	120.5
24	102.9	103.3	103.6	104.0	104.3	104.7	105.0	105.4	105.7	106.1	106.4	106.8	73	122.7	122.8	123.0	123.1	123.2	123.4	123.5	123.6	123.8	123.9	124.1	124.2
25	107.1	107.4	107.8	108.1	108.5	108.8	109.2	109.5	109.9	110.2	110.6	110.9	74	124.3	124.5	124.6	124.8	124.9	125.0	125.2	125.3	125.4	125.6	125.7	125.9
26																									
	111.3	111.6	112.0	112.3	112.6	113.0	113.3	113.7	114.0	114.4	114.7	115.1	75	126.0	126.1	126.3	126.4	126.6	126.7	126.8	127.0	127.1	127.2	127.4	127.5
27	115.4	115.8	116.1	116.5	116.8	117.1	117.5	117.8	118.2	118.5	118.9	119.2	75											127.4	127.5
27 28	115.4 119.6	115.8 119.9	116.1 120.3	116.5 120.6	116.8 121.0	117.1 121.3	117.5 121.7	117.8 122.0	118.2 122.3	118.5 122.7	118.9 123.0	119.2 123.4	75		FROM 7	6 TO 100	FEET, T	HE IDEA	L READI	NG ON 1	HE PER	CENT ME	ETER IS		127.5
27	115.4	115.8	116.1	116.5	116.8	117.1	117.5	117.8	118.2	118.5	118.9	119.2	75		FROM 7	6 TO 100 D TO 30	FEET, T PERCEN	HE IDEA T, DUE T	L READI O THE II	NG ON T	HE PER	CENT ME	TER IS		127.5
27 28 29	115.4 119.6 123.7	115.8 119.9 124.1 128.2	116.1 120.3 124.4 128.6	116.5 120.6 124.8 128.9	116.8 121.0 125.1 129.3	117.1 121.3 125.5 129.6	117.5 121.7 125.8 130.0	117.8 122.0 126.2 130.3	118.2 122.3 126.5 130.7	118.5 122.7 126.9 131.0	118.9 123.0 127.2	119.2 123.4 127.5	75		FROM 7	6 TO 100 D TO 30	FEET, T PERCEN	HE IDEA T, DUE T	L READI O THE II	NG ON T	HE PER	CENT ME	TER IS		127.5
27 28 29	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3	116.1 120.3 124.4 128.6 31 TO 60	116.5 120.6 124.8 128.9 FEET, TI	116.8 121.0 125.1 129.3 HE IDEAL	117.1 121.3 125.5 129.6 L READII	117.5 121.7 125.8 130.0	117.8 122.0 126.2 130.3 HE PERC	118.2 122.3 126.5 130.7 ENT ME	118.5 122.7 126.9 131.0	118.9 123.0 127.2	119.2 123.4 127.5			FROM 70 REDUCE JUM	6 TO 100 D TO 30 PERS AI	FEET, T PERCEN	HE IDEA T, DUE T LIMITED	L READI O THE II	ING ON 1 NCREAS	HE PER	CENT ME	TER IS		127.5
27 28 29	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3 REDUCE	116.1 120.3 124.4 128.6 31 TO 60 D TO 50	116.5 120.6 124.8 128.9 FEET, TI PERCEN	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T	117.1 121.3 125.5 129.6 READII	117.5 121.7 125.8 130.0 NG ON T	117.8 122.0 126.2 130.3 HE PERC ED RESI	118.2 122.3 126.5 130.7 EENT ME	118.5 122.7 126.9 131.0 ETER IS	118.9 123.0 127.2	119.2 123.4 127.5	75 FEET		FROM 70 REDUCE JUM	6 TO 100 D TO 30 I PERS AI	FEET, T PERCEN ND THE I	HE IDEA T, DUE T LIMITED	L READI O THE II OUTPUT PERCEN	ING ON T NCREAS VOLTA	THE PERO ED RESI GE OF TI	CENT ME STANCE HE TEST	ETER IS OF THE ER.		
27 28 29	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3 REDUCE	116.1 120.3 124.4 128.6 31 TO 60 D TO 50	116.5 120.6 124.8 128.9 FEET, TI PERCEN	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T	117.1 121.3 125.5 129.6 READII	117.5 121.7 125.8 130.0 NG ON T	117.8 122.0 126.2 130.3 HE PERC	118.2 122.3 126.5 130.7 EENT ME	118.5 122.7 126.9 131.0 ETER IS	118.9 123.0 127.2	119.2 123.4 127.5	FEET	i	FROM 70 REDUCE JUM IN 1	6 TO 100 D TO 30 PERS AI ICHES 2	FEET, T PERCEN ND THE I 3	HE IDEA T, DUE T LIMITED 30	L READI O THE II OUTPUT PERCEN	ING ON 1 NCREAS VOLTA NT	THE PERI ED RESI GE OF TI	CENT ME STANCE HE TEST	ETER IS OF THE ER. 9	10	11
27 28 29	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3 REDUCE	116.1 120.3 124.4 128.6 31 TO 60 D TO 50	116.5 120.6 124.8 128.9 FEET, TI PERCEN	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED	117.1 121.3 125.5 129.6 READII	117.5 121.7 125.8 130.0 NG ON TI NCREAS	117.8 122.0 126.2 130.3 HE PERC ED RESI	118.2 122.3 126.5 130.7 EENT ME	118.5 122.7 126.9 131.0 ETER IS	118.9 123.0 127.2	119.2 123.4 127.5			FROM 70 REDUCE JUM	6 TO 100 D TO 30 I PERS AI	FEET, T PERCEN ND THE I	HE IDEA T, DUE T LIMITED	L READI O THE II OUTPUT PERCEN	ING ON T NCREAS VOLTA	THE PERO ED RESI GE OF TI	CENT ME STANCE HE TEST	ETER IS OF THE ER.		
27 28 29	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3 REDUCEI JUM	116.1 120.3 124.4 128.6 31 TO 60 D TO 50 IPERS AI	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED	117.1 121.3 125.5 129.6 L READII O THE II OUTPUT	117.5 121.7 125.8 130.0 NG ON TI NCREAS VOLTAG	117.8 122.0 126.2 130.3 HE PERO ED RESIS	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST	118.5 122.7 126.9 131.0 ETER IS OF THE	118.9 123.0 127.2 131.4	119.2 123.4 127.5 131.7	FEET	95.7	FROM 70 REDUCE JUM IN 1 95.9	6 TO 100 D TO 30 PERS AI ICHES 2 96.0	FEET, T PERCEN ND THE I 3 96.1	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7	L READI O THE II OUTPUT PERCEN 5 96.3	NG ON 1 NCREAS VOLTA NT 6 96.4	THE PERO ED RESI GE OF TI 7 96.5	CENT ME STANCE HE TEST 8 96.6	ETER IS OF THE ER. 9 96.7	10 96.8	11 96.9
27 28 29 30	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3 REDUCEI JUM	116.1 120.3 124.4 128.6 31 TO 60 D TO 50 IPERS AI	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50	117.1 121.3 125.5 129.6 L READII O THE II OUTPUT PERCEN	117.5 121.7 125.8 130.0 NG ON TI NCREAS VOLTAG	117.8 122.0 126.2 130.3 HE PERO ED RESIS GE OF TH	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST	118.5 122.7 126.9 131.0 ETER IS OF THE ER.	118.9 123.0 127.2 131.4	119.2 123.4 127.5 131.7	FEET 76 77 78 79	95.7 97.0 98.2 99.5	FROM 76 REDUCE JUM IN 1 95.9 97.1 98.3 99.6	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9	L READI O THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0	NG ON 1 NCREAS VOLTA NT 6 96.4 97.6 98.9 100.1	THE PERI ED RESI GE OF TI 7 96.5 97.7 99.0 100.2	8 96.6 97.8 99.1 100.3	9 96.7 97.9 99.2 100.4	10 96.8 98.0 99.3 100.5	11 96.9 98.1 99.4 100.6
27 28 29 30 FEET	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3 REDUCEI JUM IN 1 66.2	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7	117.1 121.3 125.5 129.6 READII TO THE II OUTPUT PERCEN 5 66.9	117.5 121.7 125.8 130.0 NG ON TI NCREAS VOLTAG NT 6 67.1	117.8 122.0 126.2 130.3 HE PERO ED RESIS GE OF TH	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST	118.5 122.7 126.9 131.0 ETER IS E OF THE ER. 9 67.6	118.9 123.0 127.2 131.4	119.2 123.4 127.5 131.7	FEET 76 77 78 79 80	95.7 97.0 98.2 99.5 100.7	FROM 76 FEDUCE JUM IN 95.9 97.1 98.3 99.6 100.8	6 TO 100 D TO 30 I PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8 101.0	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2	L READI O THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3	NG ON T NCREAS VOLTA NT 6 96.4 97.6 98.9 100.1 101.4	THE PERI ED RESI GE OF TI 7 96.5 97.7 99.0 100.2 101.5	8 96.6 97.8 99.1 100.3 101.6	9 96.7 97.9 99.2 100.4 101.7	10 96.8 98.0 99.3 100.5 101.8	11 96.9 98.1 99.4 100.6 101.9
27 28 29 30 FEET	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM IN 1 66.2 68.3	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8	117.1 121.3 125.5 129.6 L READII TO THE II OUTPUT PERCEN 5 66.9 69.0	117.5 121.7 125.8 130.0 NG ON TI NCREAS VOLTAG NT 6 67.1 69.1	117.8 122.0 126.2 130.3 HE PERC ED RESIS GE OF TH	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5	118.5 122.7 126.9 131.0 ETER IS OF THE ER. 9 67.6 69.7	118.9 123.0 127.2 131.4 10 67.8 69.8	119.2 123.4 127.5 131.7	FEET 76 77 78 79 80 81	95.7 97.0 98.2 99.5 100.7 102.0	FROM 76 REDUCE JUM 1 95.9 97.1 98.3 99.6 100.8 102.1	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2	FEET, T PERCEN ND THE I 96.1 97.3 98.6 99.8 101.0 102.3	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4	L READI O THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3 102.5	NG ON 1 NCREAS VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6	THE PER(ED RESI GE OF TI 7 96.5 97.7 99.0 100.2 101.5 102.7	8 96.6 97.8 99.1 100.3 101.6 102.8	9 96.7 97.9 99.2 100.4 101.7 102.9	10 96.8 98.0 99.3 100.5 101.8 103.0	11 96.9 98.1 99.4 100.6 101.9 103.1
27 28 29 30 FEET	115.4 119.6 123.7 127.9	115.8 119.9 124.1 128.2 FROM 3 REDUCEI JUM IN 1 66.2	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7	117.1 121.3 125.5 129.6 READII TO THE II OUTPUT PERCEN 5 66.9	117.5 121.7 125.8 130.0 NG ON TI NCREAS VOLTAG NT 6 67.1	117.8 122.0 126.2 130.3 HE PERO ED RESIS GE OF TH	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST	118.5 122.7 126.9 131.0 ETER IS E OF THE ER. 9 67.6	118.9 123.0 127.2 131.4	119.2 123.4 127.5 131.7	FEET 76 77 78 79 80	95.7 97.0 98.2 99.5 100.7	FROM 76 FEDUCE JUM IN 95.9 97.1 98.3 99.6 100.8	6 TO 100 D TO 30 PERS Al ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8 101.0 102.3 103.5	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2	L READI O THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3 102.5 103.8	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9	THE PER(ED RES) GE OF TI 7 96.5 97.7 99.0 100.2 101.5 102.7 104.0	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1	9 96.7 97.9 99.2 100.4 101.7 102.9	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4
27 28 29 30 FEET	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM 1 66.2 68.3 70.4 72.4 74.5	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 68.4 70.5 72.6 74.7	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE 3 66.5 68.6 70.7 72.8 74.9	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0	117.1 121.3 125.5 129.6 L READII TO THE II OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2	117.5 121.7 125.8 130.0 NG ON TI NCREAS VOLTAC NT 6 67.1 69.1 71.2 73.3 75.4	117.8 122.0 126.2 130.3 HE PERC ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2	FEET 76 77 78 79 80 81 82	95.7 97.0 98.2 99.5 100.7 102.0 103.2	FROM 76 REDUCE JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2	FEET, T PERCEN ND THE I 96.1 97.3 98.6 99.8 101.0 102.3	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6	L READI O THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3 102.5	NG ON 1 NCREAS VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6	THE PER(ED RESI GE OF TI 7 96.5 97.7 99.0 100.2 101.5 102.7	8 96.6 97.8 99.1 100.3 101.6 102.8	9 96.7 97.9 99.2 100.4 101.7 102.9	10 96.8 98.0 99.3 100.5 101.8 103.0	11 96.9 98.1 99.4 100.6 101.9 103.1
27 28 29 30 FEET 31 32 33 34 35 36	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM 1 66.2 68.3 70.4 72.4 74.5 76.6	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 68.4 70.5 72.6 74.7 76.8	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1	117.1 121.3 125.5 129.6 L READII TO THE II OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAG NT 667.1 69.1 71.2 73.3 75.4 77.5	117.8 122.0 126.2 130.3 HE PERC ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7 77.8	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3	FEET 76 77 78 79 80 81 82 83	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5	FROM 7: REDUCE JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1	6 TO 100 D TO 30 I PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2	FEET, T PERCEN ND THE I 96.1 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4	L READI TO THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3 102.5 103.8 105.0 106.0 106.2 107.5	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 105.3 106.6 107.8	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 105.4 106.7 107.9	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 108.0	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1
27 28 29 30 FEET 31 32 33 34 35 36 37	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4 78.5	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM IN 1 66.2 68.3 70.4 72.4 74.5 76.6 76.6	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 78.8	116.5 120.6 124.8 128.9 FEET, TIPERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1 79.2	117.1 121.3 125.5 129.6 L READII OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3 79.4	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAG NT 66.1 69.1 71.2 73.3 75.4 77.5 79.5	117.8 122.0 126.2 130.3 HE PERO ED RESI: GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7 77.8 79.9	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4	FEET 76 77 78 79 80 81 82 83 84 85 86	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.7 107.0	FROM 7: REDUCEI JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 108.3	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2	FEET, T PERCEN ND THE I 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6	L READI TO THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 108.7	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 106.5 107.7 108.9	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 105.3 106.6 107.8 109.1	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 105.4 106.7 107.9 109.2	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 108.0	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1 109.4
27 28 29 30 FEET 31 32 33 34 35 36 37 37	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4 80.6	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM 1 66.2 70.4 72.4 74.5 76.6 78.7 80.8	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 80.9	116.5 120.6 124.8 128.9 FEET, TIPERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0 81.1	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1 79.2 81.3	117.1 121.3 125.5 129.6 READIN O THE II OUTPUT PERCEN 5 66.9 69.0 73.1 75.2 77.3 79.4 81.4	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAGE NT 66 67.1 69.1 71.2 73.3 75.4 77.5 81.6	117.8 122.0 126.2 130.3 HE PERC ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7 81.8	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7 77.8 82.0	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1 82.1	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2 82.3	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4 82.5	FEET 76 77 78 79 80 81 82 83 84 85 86	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.0 108.2 109.5	FROM 7: REDUCE JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 108.3 109.6	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2 108.4 109.7	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5 109.8	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6 109.9	L READI TO THE II OUTPUT PERCEN 96.3 97.5 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 108.7 110.0	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8 110.1	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 106.5 107.7 108.9 110.2	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 105.3 106.6 107.8 109.1 110.3	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 105.4 106.7 107.9 109.2 110.4	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 108.0 109.3 110.5	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1 109.4 110.6
27 28 29 30 FEET 31 32 33 34 35 36 37	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4 78.5	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM IN 1 66.2 68.3 70.4 72.4 74.5 76.6 76.6	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 78.8	116.5 120.6 124.8 128.9 FEET, TIPERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1 79.2	117.1 121.3 125.5 129.6 L READII OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3 79.4	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAG NT 66.1 69.1 71.2 73.3 75.4 77.5 79.5	117.8 122.0 126.2 130.3 HE PERO ED RESI: GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7 77.8 79.9	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4	FEET 76 77 78 79 80 81 82 83 84 85 86 87	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.0 108.2 109.5 110.7	FROM 7: REDUCE: JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 108.3 109.6 110.8	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2 108.4 109.7 109.1	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5 109.8 111.0	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6 109.9 111.1	L READI TO THE II OUTPUT PERCEN 5 96.3 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 108.7 110.0 111.2	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8 110.1 111.3	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 106.5 107.7 108.9 110.2 111.4	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 105.3 106.6 107.8 109.1 110.3 111.5	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 105.4 106.7 107.9 109.2 110.4 111.7	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 108.0 109.3 110.5 111.8	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1 110.6 111.9
27 28 29 30 FEET 31 32 33 34 35 36 37 38 39	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4 78.5 80.6 82.7	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM IN 1 66.2 68.3 70.4 72.4 74.5 76.6 78.7 80.8 82.8	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 68.4 70.5 72.6 74.7 76.8 78.8 80.9 83.0	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0 81.1 83.2	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1 79.2 81.3 83.3	117.1 121.3 125.5 129.6 L READII TO THE II OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3 79.4 81.4 83.5	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAC NT 6 67.1 71.2 73.3 75.4 77.5 79.5 81.6 83.7	117.8 122.0 126.2 130.3 HE PERC ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 77.6 79.7 81.8 83.9	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7 77.8 79.9 82.0 84.0	118.5 122.7 126.9 131.0 ETER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1 82.1 84.2	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2 82.3 84.4	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4 82.5 84.6	FEET 76 77 78 79 80 81 82 83 84 85 86	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.0 108.2 109.5	FROM 7: REDUCE JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 108.3 109.6	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2 108.4 109.7	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5 109.8	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6 109.9	L READI TO THE II OUTPUT PERCEN 96.3 97.5 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 108.7 110.0	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8 110.1	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 106.5 107.7 108.9 110.2	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 105.3 106.6 107.8 109.1 110.3	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 105.4 106.7 107.9 109.2 110.4	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 108.0 109.3 110.5	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1 109.4 110.6
27 28 29 30 FEET 31 32 33 34 35 36 37 38 39 40 41 42	115.4 119.6 123.7 127.9 666.0 68.1 70.2 72.3 74.3 76.3 78.5 80.6 82.7 84.7 84.7 84.8 88.9	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM IN 1 66.2 70.4 72.4 74.5 76.6 78.7 80.8 82.8 84.9 87.0 89.1	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 80.9 83.0 85.1 87.2 89.2	116.5 120.6 124.8 128.9 FEET, TIPERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0 81.1 83.2 85.3 87.3	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1 79.2 81.3 83.3 85.4 87.5 89.6	117.1 121.3 125.5 129.6 L READII OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3 79.4 81.4 83.5 85.6 87.7 89.8	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAG VT 66.1 69.1 71.2 73.3 75.4 77.5 79.5 81.6 83.7 85.9 87.9	117.8 122.0 126.2 130.3 HE PERC ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7 81.8 83.9 85.9 88.0 90.1	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7 77.8 79.9 82.0 84.0 86.1 88.2 90.3	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1 82.1 84.2 86.3 88.4 90.5	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2 82.3 84.4 86.5 90.6	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4 82.5 84.6 86.6 88.7 90.8	FEET 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.7 110.7 112.0 113.2 114.5	FROM 7: REDUCEI JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 108.3 109.6 110.8 112.1 113.3 114.6	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.9 107.9 110.9 112.2 113.4 114.7	FEET, T PERCEN ND THE I 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5 109.8 111.0 112.3 113.5 114.8	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6 109.9 111.1 112.4 113.6 114.9	L READI TO THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 108.7 110.0 111.2 112.5 113.7 115.0	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8 110.1 111.3 112.6 113.8 115.1	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 107.7 108.9 110.2 111.4 112.7 113.9 115.2	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 105.3 106.6 107.8 111.5 112.8 114.0 115.3	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 110.4 111.7 112.7 112.9 114.1 115.4	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 109.3 110.5 111.8 113.0 114.3 115.5	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1 109.4 110.6 111.9 113.1 114.4 115.6
27 28 29 30 30 FEET 31 32 33 34 35 36 37 38 39 40 41 42 43	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4 80.6 82.7 84.7 86.8 91.0	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM 1 66.2 70.4 72.4 74.5 76.6 78.7 80.8 82.8 84.9 87.0 89.1 91.1	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 80.9 83.0 85.1 87.2 89.2 91.3	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0 81.1 83.2 85.3 87.3 87.3 89.4 91.5	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 73.0 75.0 77.1 79.2 81.3 83.3 85.4 87.9 89.6 91.7	117.1 121.3 125.5 129.6 READII OUTPUT PERCEN 5 66.9 71.0 73.1 75.2 77.3 79.4 81.4 83.5 85.6 87.7 89.8 91.8	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAGE NT 66 67.1 69.1 71.2 73.3 75.4 77.5 81.6 83.7 85.8 87.9 89.9 92.0	117.8 122.0 126.2 130.3 HE PERC ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7 81.8 83.9 85.9 88.9 90.1 90.1	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7 77.8 82.0 84.0 86.1 88.2 90.3 92.4	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1 82.1 84.2 86.3 88.4 90.5 92.5	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2 82.3 84.4 86.5 88.5 90.6 92.7	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4 82.5 84.6 86.6 88.7 90.8 92.9	FEET 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.0 110.7 112.0 113.2 114.5 115.7	FROM 7: REDUCE JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 1108.3 109.6 110.8 112.1 113.3 114.6 115.8	6 TO 100 D TO 30 PERS AI PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2 108.4 109.7 110.9 111.2 113.4 114.7 115.9	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5 109.8 111.0 112.3 113.5 114.8 116.0	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6 109.9 111.1 112.4 113.6	L READI TO THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 110.0 111.2 112.5 113.7 115.0 116.2	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 111.3 112.6 113.8 115.1 116.3	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 106.5 107.7 108.9 110.2 111.4 112.7 113.9 115.2 116.4	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 110.3 111.5 112.8 114.0 115.3 116.5	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 105.4 106.7 107.9 110.4 111.7 112.9 114.1 115.4 116.6	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 108.0 111.8 113.0 114.3 115.5 116.7	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1 110.6 111.9 113.1 111.4 115.6 116.8
27 28 29 30 30 FEET 31 32 33 34 35 36 37 38 39 40 41 42 43 44	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4 78.5 80.6 82.7 84.7 86.8 88.9 91.0 93.1	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM 1 66.2 68.3 70.4 74.5 76.6 78.7 80.8 82.8 84.9 87.0 89.1 91.1 93.2	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 78.8 80.9 83.0 85.1 87.2 89.2 991.3 93.4	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0 81.1 83.2 85.3 87.3 89.4 91.5 93.6	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1 79.2 81.3 83.3 85.4 87.5 89.6 91.7 93.7	117.1 121.3 125.5 129.6 L READII TO THE II OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3 79.4 81.4 83.5 85.6 87.7 89.8 91.8 93.9	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAC NT 667.1 69.1 71.2 73.3 75.4 77.5 79.5 81.6 83.7 85.8 87.9 99.2.0 94.1	117.8 122.0 126.2 130.3 HE PERCI ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7 81.8 83.9 85.9 88.0 90.1 92.2 94.3	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 75.7 77.8 79.9 82.0 86.1 88.2 90.3 92.4 94.4	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1 82.1 84.2 86.3 88.4 90.5 92.5 94.6	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2 82.3 84.4 86.5 88.5 90.6 92.7 94.8	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4 82.5 84.6 86.6 88.7 90.8 92.9 95.0	FEET 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.0 118.2 119.5 110.7 112.0 113.2 114.5 115.7	FROM 77 REDUCE JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 108.3 109.6 110.8 110.8 112.1 113.3 114.6 115.8	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2 108.4 109.7 110.9 112.2 113.4 114.7 115.9 117.2	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5 111.0 112.3 113.5 114.8 116.0 117.3	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6 109.9 111.1 112.4 113.6 114.9	L READI TO THE II OUTPUT PERCEN 5 96.3 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 108.7 110.0 111.2 112.5 113.7 115.0 116.2 117.5	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8 110.1 111.3 112.6 113.8 115.1 116.3	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 111.4 112.7 113.9 115.2 116.4 117.7	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 115.3 111.5 112.8 114.0 115.3 116.5 117.8	9 96.7 97.9 99.2 100.4 101.7 102.9 104.4 111.7 112.9 114.1 115.4 116.6 117.9	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 108.0 111.8 113.0 114.3 115.5 116.7 118.0	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1 110.6 111.9 113.1 114.4 115.6 116.8 118.1
27 28 29 30 30 FEET 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	115.4 119.6 123.7 127.9 666.0 68.1 70.2 72.3 74.3 76.4 78.5 80.6 82.7 84.7 86.8 88.9 91.0 93.1 95.1	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM IN 1 66.2 68.3 70.4 72.4 74.5 76.6 78.7 80.8 82.8 84.9 87.0 89.1 91.1 93.2 95.3	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 78.8 80.9 83.0 85.1 87.2 89.2 91.3 93.4 95.5	116.5 120.6 124.8 128.9 FEET, TIPERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0 81.1 83.2 85.3 87.3 89.4 91.5 93.6 95.6	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 75.0 77.1 79.2 81.3 83.3 83.4 87.5 89.6 91.7 93.7	117.1 121.3 125.5 129.6 L READII OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3 79.4 81.4 83.5 85.6 87.7 89.8 91.8 93.9 96.0	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAGE NT 66.7.1 69.1 71.2 73.3 75.4 77.5 79.5 81.6 83.7 85.8 87.9 89.9 92.0 94.1 96.2	117.8 122.0 126.2 130.3 HE PERC ED RESI: GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7 81.8 83.9 88.0 90.1 92.2 94.3 96.3	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 77.8 79.9 82.0 84.0 86.1 88.2 90.3 92.4 94.4 94.4 96.5	118.5 122.7 126.9 131.0 TER IS COF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1 82.1 84.2 86.3 88.4 90.5 92.5 94.6 96.7	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2 82.3 84.4 86.5 88.5 90.6 92.7 94.8 96.9	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4 82.5 84.6 86.6 88.7 90.8 92.9 95.0 97.0	FEET 76 77 78 79 80 81 82 83 84 85 86 87 88 990 91 92 93	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.0 108.2 110.7 112.0 113.2 114.5 115.7 117.0 118.2	FROM 7: REDUCEI JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 108.3 109.6 110.8 112.1 113.3 114.6 115.8 117.1	6 TO 100 D TO 30 I PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2 108.4 109.7 110.9 112.2 113.4 114.7 115.9 117.2 118.4	FEET, T PERCEN ND THE I 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5 109.8 111.3 113.5 114.8 116.0 117.3 118.5	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6 109.9 111.1 112.4 113.6 114.9 116.1 117.4 118.6	L READI TO THE II OUTPUT 96.3 97.5 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 108.7 110.0 111.2 112.5 113.7 115.0 116.2 117.5 118.7	NG ON T NCREAS T VOLTA T NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8 110.1 111.3 112.6 113.8 115.1 116.3 117.6 118.8	7 96.5 97.7 99.0 100.2 101.5 102.7 108.9 110.2 111.4 112.7 113.9 115.2 116.4 117.7 118.9	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 110.3 111.5 112.8 114.0 115.3 116.5 117.8 119.0	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 105.4 106.7 117.9 119.2 110.4 111.7 115.4 116.6 117.9 119.1	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 110.5 111.5 111.0 114.3 115.5 116.7 118.0 119.2	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 111.9 113.1 114.4 115.6 116.8 118.1 119.3
27 28 29 30 30 FEET 31 32 33 34 35 36 37 38 39 40 41 42 43 44	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4 78.5 80.6 82.7 84.7 86.8 88.9 91.0 93.1	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM 1 66.2 68.3 70.4 74.5 76.6 78.7 80.8 82.8 84.9 87.0 89.1 91.1 93.2	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 78.8 80.9 83.0 85.1 87.2 89.2 991.3 93.4	116.5 120.6 124.8 128.9 FEET, TI PERCEN ND THE 1 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0 81.1 83.2 85.3 87.3 89.4 91.5 93.6	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1 79.2 81.3 83.3 85.4 87.5 89.6 91.7 93.7	117.1 121.3 125.5 129.6 L READII TO THE II OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3 79.4 81.4 83.5 85.6 87.7 89.8 91.8 93.9	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAC NT 667.1 69.1 71.2 73.3 75.4 77.5 79.5 81.6 83.7 85.8 87.9 99.2.0 94.1	117.8 122.0 126.2 130.3 HE PERCI ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7 81.8 83.9 85.9 88.0 90.1 92.2 94.3	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 75.7 77.8 79.9 82.0 86.1 88.2 90.3 92.4 94.4	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1 82.1 84.2 86.3 88.4 90.5 92.5 94.6	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2 82.3 84.4 86.5 88.5 90.6 92.7 94.8	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4 82.5 84.6 86.6 88.7 90.8 92.9 95.0	FEET 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 107.0 118.2 119.5 110.7 112.0 113.2 114.5 115.7	FROM 77 REDUCE JUM 1 95.9 97.1 98.3 99.6 100.8 102.1 103.3 104.6 105.8 107.1 108.3 109.6 110.8 110.8 112.1 113.3 114.6 115.8	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2 108.4 109.7 110.9 112.2 113.4 114.7 115.9 117.2	FEET, T PERCEN ND THE I 3 96.1 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 107.3 108.5 111.0 112.3 113.5 114.8 116.0 117.3	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 107.4 108.6 109.9 111.1 112.4 113.6 114.9	L READI TO THE II OUTPUT PERCEN 5 96.3 98.8 100.0 101.3 102.5 103.8 105.0 106.2 107.5 108.7 110.0 111.2 112.5 113.7 115.0 116.2 117.5	NG ON T NCREAS T VOLTA NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8 110.1 111.3 112.6 113.8 115.1 116.3	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 111.4 112.7 113.9 115.2 116.4 117.7	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 115.3 111.5 112.8 114.0 115.3 116.5 117.8	9 96.7 97.9 99.2 100.4 101.7 102.9 104.4 111.7 112.9 114.1 115.4 116.6 117.9	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 108.0 111.8 113.0 114.3 115.5 116.7 118.0	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 106.9 108.1 110.6 111.9 113.1 114.4 115.6 116.8 118.1
27 28 29 30 30 FEET 31 32 33 34 35 36 37 38 39 40 41 42 43 44 44 45 46	115.4 119.6 123.7 127.9 66.0 68.1 70.2 72.3 74.3 76.4 78.5 80.6 82.7 84.7 86.8 88.9 91.0 93.1 95.1 97.2	115.8 119.9 124.1 128.2 FROM 3 REDUCE JUM IN 1 66.2 68.3 70.4 72.4 74.5 76.6 78.7 80.8 82.8 84.9 87.0 89.1 91.1 93.2 95.3 97.4	116.1 120.3 124.4 128.6 11 TO 60 D TO 50 IPERS AI ICHES 2 66.4 70.5 72.6 74.7 76.8 78.8 80.9 83.0 85.1 87.2 89.2 91.3 93.4 95.5	116.5 120.6 124.8 128.9 FEET, TIPERCEN ND THE 3 66.5 68.6 70.7 72.8 74.9 76.9 79.0 81.1 83.2 85.3 87.3 89.4 91.5 93.6 95.6	116.8 121.0 125.1 129.3 HE IDEAL IT, DUE T LIMITED 50 4 66.7 68.8 70.9 73.0 75.0 77.1 79.2 81.3 83.3 85.4 87.5 89.6 91.7 93.8 91.7	117.1 121.3 125.5 129.6 L READII OUTPUT PERCEN 5 66.9 69.0 71.0 73.1 75.2 77.3 79.4 81.4 83.5 85.6 87.7 89.8 91.8 93.9 96.0 98.1	117.5 121.7 125.8 130.0 NG ON TINCREAS VOLTAG NT 66.1 71.2 73.3 75.4 77.5 81.6 83.7 81.6 83.7 89.9 92.0 94.1 96.2 98.2	117.8 122.0 126.2 130.3 HE PERC ED RESIS GE OF TH 7 67.2 69.3 71.4 73.5 75.6 77.6 79.7 81.8 83.9 85.9 88.0 90.1 92.2 94.3 96.3 98.4	118.2 122.3 126.5 130.7 EENT ME STANCE HE TEST 8 67.4 69.5 71.6 73.6 75.7 77.8 79.9 82.0 84.0 86.1 88.2 90.3 92.4 94.4 96.5 98.6	118.5 122.7 126.9 131.0 TER IS OF THE ER. 9 67.6 69.7 71.7 73.8 75.9 78.0 80.1 82.1 84.2 86.3 88.4 90.5 92.5 94.6 96.7 98.8	118.9 123.0 127.2 131.4 10 67.8 69.8 71.9 74.0 76.1 78.2 80.2 82.3 84.4 86.5 88.5 90.6 92.7 94.9 98.9	119.2 123.4 127.5 131.7 11 67.9 70.0 72.1 74.2 76.2 78.3 80.4 82.5 84.6 86.6 88.7 90.8 92.9 95.0 97.0 99.1	FEET 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95	95.7 97.0 98.2 99.5 100.7 102.0 103.2 104.5 105.7 117.0 118.2 114.5 115.7 117.0 118.2 119.4	FROM 7: REDUCEI JUM 1 95.9 97.1 98.3 99.6 102.1 103.3 104.6 105.8 107.1 108.3 109.6 110.8 112.1 113.3 114.6 115.8 117.1 118.3 119.6	6 TO 100 D TO 30 PERS AI ICHES 2 96.0 97.2 98.5 99.7 100.9 102.2 103.4 104.7 105.9 107.2 113.4 114.7 115.9 117.2 118.4 119.7	FEET, T PERCEN ND THE I 97.3 98.6 99.8 101.0 102.3 103.5 104.8 106.0 117.3 113.5 114.8 116.0 117.3 118.5 119.8	HE IDEA T, DUE T LIMITED 30 4 96.2 97.4 98.7 99.9 101.2 102.4 103.6 104.9 106.1 117.4 113.6 114.9 116.1 117.4 118.6 118.9	L READI TO THE II OUTPUT PERCEN 5 96.3 97.5 98.8 100.0 101.3 102.5 103.8 105.0 106.2 110.5 111.2 112.5 113.7 115.0 116.2 117.5 118.7	NG ON T NCREAS T VOLTA T NT 6 96.4 97.6 98.9 100.1 101.4 102.6 103.9 105.1 106.4 107.6 108.8 110.1 111.3 112.6 113.8 115.1 116.3 117.6 118.8 118.8 118.8	7 96.5 97.7 99.0 100.2 101.5 102.7 104.0 105.2 101.5 107.7 108.9 110.2 111.4 112.7 113.9 115.2 116.4 117.7 118.9 120.2	8 96.6 97.8 99.1 100.3 101.6 102.8 104.1 110.3 111.5 112.8 114.0 115.3 116.5 117.8 119.0 120.3	9 96.7 97.9 99.2 100.4 101.7 102.9 104.2 105.4 106.7 107.9 109.2 110.4 111.7 112.9 114.1 115.4 116.6 117.9 119.1	10 96.8 98.0 99.3 100.5 101.8 103.0 104.3 105.5 106.8 113.0 114.3 115.5 116.7 118.0 119.2 120.5	11 96.9 98.1 99.4 100.6 101.9 103.1 104.4 105.6 108.1 109.4 110.6 111.9 113.1 114.4 115.6 116.8 118.1 119.3 120.6

123.2 123.3

125.7 125.8

100

125.9 126.0 126.1

123.6

123.4 123.5

124.4 124.5 124.6 124.7 124.9

125.0 125.1 125.2

126.2 126.3 126.4

123.7 123.8

123.9

124.0

124.1

125.3 125.4

126.5 126.6

124.2

125.5

126.7

124.3

125.6

126.8

FEET

INCHES 1 2

3

4 5 6 7

8 9 10

VOLTAGE INPUT SETTINGS 1/0 CABLE

					., .	9, \D							73	70.2	70.4	10.5	70.0	70.0	10.3	13.0	13.1	13.3	13.4	13.3
			FOR US	SE WITH	HASTING	S FIBER	GLASS	PRODU	CTS				50	79.8	79.9	80.1	80.2	80.3	80.5	80.6	80.7	80.8	81.0	81.1
	FOR USE WITH HASTINGS FIBER GLASS PRODUCTS 6714 TESTER														81.5	81.6	81.8	81.9	82.0	82.1	82.3	82.4	82.5	82.7
						ber 20, 1							52	82.9	83.1	83.2	83.3	83.5	83.6	83.7	83.8	84.0	84.1	84.2
					Coptoni		000						53	84.5	84.6	84.8	84.9	85.0	85.1	85.3	85.4	85.5	85.7	85.8
FEET		IN	ICHES										54	86.1	86.2	86.3	86.4	86.6	86.7	86.8	87.0	87.1	87.2	87.4
		1	2	3	4	5	6	7	8	9	10	11	55	87.6	87.8	87.9	88.0	88.1	88.3	88.4	88.5	88.7	88.8	88.9
3	12.5	12.8	13.1	13.3	13.6	13.8	14.1	14.4	14.6	14.9	15.1	15.4	56	89.2	89.3	89.4	89.6	89.7	89.8	90.0	90.1	90.2	90.4	90.5
4	15.7	15.9	16.2	16.4	16.7	17.0	17.2	17.5	17.8	18.0	18.3	18.5	57	90.8	90.9	91.0	91.1	91.3	91.4	91.5	91.7	91.8	91.9	92.1
5	18.8	19.1	19.3	19.6	19.8	20.1	20.4	20.6	20.9	21.1	21.4	21.7	58	92.3	92.4	92.6	92.7	92.8	93.0	93.1	93.2	93.4	93.5	93.6
9	21.9	22.2	22.4	22.7	23.0	23.2	23.5	23.7	24.0	24.3	24.5	24.8	59	93.9	94.0	94.1	94.3	94.4	94.5	94.7	94.8	94.9	95.1	95.2
7	25.1	25.3	25.6	25.8	26.1	26.4	26.6	26.9	27.1	27.4	27.7	27.9	60	95.4	95.6	95.7	95.8	96.0	96.1	96.2	96.4	96.5	96.6	96.7
,	28.2	28.4	28.7	29.0	29.2	29.5	29.7	30.0	30.3	30.5	30.8	31.1	61	97.0	97.1	97.3	97.4	97.5	97.7	97.8	97.9	98.1	98.2	98.3
9	31.3	31.6		32.1	32.4	32.6	32.9	33.1	33.4	33.7	33.9	34.2	62	98.6	98.7	98.8	99.0	99.1	99.2	99.4	99.5	99.6	99.7	99.9
-	34.4	34.7	31.8 35.0	35.2	35.5	35.7	36.0	36.3	36.5	36.8	37.0	37.3	63	100.1	100.3	100.4	100.5	100.7	100.8	100.9	101.1	101.2	101.3	101.4
10													64	101.7	101.8	102.0	102.1	102.2	102.4	102.5	102.6	102.7	102.9	103.0
11	37.6 40.7	37.8	38.1	38.4 41.5	38.6	38.9 42.0	39.1 42.3	39.4 42.5	39.7 42.8	39.9	40.2 43.3	40.4 43.6	65	103.3	103.4	102.5	103.7	103.8	103.9	104.0	104.2	104.3	104.4	104.6
12		41.0	41.2		41.7					43.0			66	103.3	105.4	105.5	105.7	105.4	105.5	105.6	105.7	105.9	106.0	104.0
13	43.8	44.1	44.3	44.6	44.9	45.1	45.4	45.7	45.9	46.2	46.4	46.7	67	104.6	105.0	106.7	105.2	106.9	103.3	107.2	107.3	103.9	100.6	100.1
14	47.0	47.2	47.5	47.7	48.0	48.3	48.5	48.8	49.0	49.3	49.6	49.8	68	108.0	108.1	108.2	108.4	100.5	107.0	107.2	107.3	107.4	107.0	107.7
15	50.1	50.3	50.6	50.9	51.1	51.4	51.6	51.9	52.2	52.4	52.7	53.0	69	109.5	109.7	100.2	100.4	110.0	110.0	110.7	110.4	110.6	110.7	110.8
16	53.2	53.5	53.7	54.0	54.3	54.5	54.8	55.0	55.3	55.6	55.8	56.1		111.1	111.2	111.4	111.5	111.6	111.7	111.9	112.0			
17	56.3	56.6	56.9	57.1	57.4	57.6	57.9	58.2	58.4	58.7	59.0	59.2	70	111.1	111.2	111.4	111.5	113.2	111.7	111.9	113.6	112.1 113.7	112.3 113.8	112.4 114.0
18	59.5	59.7	60.0	60.3	60.5	60.8	61.0	61.3	61.6	61.8	62.1	62.3	71											
19	62.6	62.9	63.1	63.4	63.6	63.9	64.2	64.4	64.7	64.9	65.2	65.5	72	114.2	114.3	114.5	114.6	114.7	114.9	115.0	115.1	115.3	115.4	115.5
20	65.7	66.0	66.3	66.5	66.8	67.0	67.3	67.6	67.8	68.1	68.3	68.6	73	115.8	115.9	116.0	116.2	116.3	116.4	116.6	116.7	116.8	117.0	117.1
21	68.9	69.1	69.4	69.6	69.9	70.2	70.4	70.7	70.9	71.2	71.5	71.7	74	117.3	117.5	117.6	117.7	117.9	118.0	118.1	118.3	118.4	118.5	118.7
22	72.0	72.2	72.5	72.8	73.0	73.3	73.6	73.8	74.1	74.3	74.6	74.9	75 70	118.9	119.0	119.2	119.3	119.4	119.6	119.7	119.8	120.0	120.1	120.2
23	75.1	75.4	75.6	75.9	76.2	76.4	76.7	76.9	77.2	77.5	77.7	78.0	76	120.5	120.6	120.7	120.9	121.0	121.1	121.3	121.4	121.5	121.7	121.8
24	78.2	78.5	78.8	79.0	79.3	79.5	79.8	80.1	80.3	80.6	80.9	81.1	77	122.0	122.2	122.3	122.4	122.6	122.7	122.8	123.0	123.1	123.2	123.3
25	81.4	81.6	81.9	82.2	82.4	82.7	82.9	83.2	83.5	83.7	84.0	84.2	78	123.6	123.7	123.9	124.0	124.1	124.3	124.4	124.5	124.6	124.8	124.9
26	84.5	84.8	85.0	85.3	85.5	85.8	86.1	86.3	86.6	86.9	87.1	87.4	79	125.2	125.3	125.4	125.6	125.7	125.8	126.0	126.1	126.2	126.3	126.5
27	87.6	87.9	88.2	88.4	88.7	88.9	89.2	89.5	89.7	90.0	90.2	90.5	80	126.7	126.9	127.0	127.1	127.3	127.4	127.5	127.6	127.8	127.9	128.0
28	90.8	91.0	91.3	91.5	91.8	92.1	92.3	92.6	92.8	93.1	93.4	93.6												
29	93.9	94.2	94.4	94.7	94.9	95.2	95.5	95.7	96.0	96.2	96.5	96.8				TO 100 I								
30	97.0	97.3	97.5	97.8	98.1	98.3	98.6	98.8	99.1	99.4	99.6	99.9		R		TO 40 P								
31	100.1	100.4	100.7	100.9	101.2	101.5	101.7	102.0	102.2	102.5	102.8	103.0			JUMF	PERS AN	D THE L	MITED C	UTPUT	VOLTAG	E OF TH	E TESTE	R.	
32	103.3	103.5	103.8	104.1	104.3	104.6	104.8	105.1	105.4	105.6	105.9	106.1												
33	106.4	106.7	106.9	107.2	107.4	107.7	108.0	108.2	108.5	108.8	109.0	109.3						40 F	PERCENT	Γ				
34	109.5	109.8	110.1	110.3	110.6	110.8	111.1	111.4	111.6	111.9	112.1	112.4												
35	112.7	112.9	113.2	113.4	113.7	114.0	114.2	114.5	114.8	115.0	115.3	115.5	FEET		II	ICHES								
															4	2	2	4			7		•	40

118.4 118.7

121.8

124.9

128.0

131.2

121.5

124.7

127.8

130.9

FEET

49

78.2

INCHES 2

78.5

1

78.4

3

78.6

4

78.8

5

78.9

6

79.0

7

79.1

9

79.4

8

79.3

10

79.5

11

79.7

81.2 82.8 84.4 85.9 87.5 89.1 90.6 92.2 93.8 95.3 96.9 98.4 100.0 101.6 103.1 104.7 106.3 107.8 109.4 111.0 112.5 114.1 115.7 117.2 118.8 120.3 121.9 123.5 125.0 126.6 128.2

FROM 41 TO 80 FEET, THE IDEAL READING ON THE PERCENT METER IS REDUCED TO 50 PERCENT, DUE TO THE INCREASED RESISTANCE OF THE JUMPERS AND THE LIMITED OUTPUT VOLTAGE OF THE TESTER.

126.2 126.5

120.2 120.5

129.6 129.9

123.6

126.7

123.4

120.0

123.1

129.4

115.8

118.9

122.1

125.2

128.3

37

38

39

40

116.1 116.3 116.6

122.6

125.7

128.8

119.7

122.8

126.0

129.1

119.2 119.4

122.3

125.4

128.6

116.8 117.1 117.4 117.6 117.9 118.1

127.0

130.1 130.4

120.7 121.0 121.3

123.9 124.1 124.4

127.3 127.5

130.7

50 PERCENT

FEET		INC	HES										
		1	2	3	4	5	6	7	8	9	10	11	
41	65.7	65.8	66.0	66.1	66.2	66.4	66.5	66.6	66.8	66.9	67.0	67.2	
42	67.3	67.4	67.5	67.7	67.8	67.9	68.1	68.2	68.3	68.5	68.6	68.7	
43	68.8	69.0	69.1	69.2	69.4	69.5	69.6	69.8	69.9	70.0	70.2	70.3	
44	70.4	70.5	70.7	70.8	70.9	71.1	71.2	71.3	71.5	71.6	71.7	71.8	
45	72.0	72.1	72.2	72.4	72.5	72.6	72.8	72.9	73.0	73.2	73.3	73.4	
46	73.5	73.7	73.8	73.9	74.1	74.2	74.3	74.5	74.6	74.7	74.8	75.0	
47	75.1	75.2	75.4	75.5	75.6	75.8	75.9	76.0	76.1	76.3	76.4	76.5	
48	76.7	76.8	76.9	77.1	77.2	77.3	77.5	77.6	77.7	77.8	78.0	78.1	

FEET		IN	ICHES									
		1	2	3	4	5	6	7	8	9	10	11
81	102.6	102.7	102.8	103.0	103.1	103.2	103.3	103.4	103.5	103.6	103.7	103.8
82	103.9	104.0	104.1	104.2	104.3	104.4	104.5	104.6	104.7	104.8	104.9	105.0
83	105.1	105.2	105.4	105.5	105.6	105.7	105.8	105.9	106.0	106.1	106.2	106.3
84	106.4	106.5	106.6	106.7	106.8	106.9	107.0	107.1	107.2	107.3	107.4	107.5
85	107.6	107.8	107.9	108.0	108.1	108.2	108.3	108.4	108.5	108.6	108.7	108.8
86	108.9	109.0	109.1	109.2	109.3	109.4	109.5	109.6	109.7	109.8	109.9	110.0
87	110.1	110.3	110.4	110.5	110.6	110.7	110.8	110.9	111.0	111.1	111.2	111.3
88	111.4	111.5	111.6	111.7	111.8	111.9	112.0	112.1	112.2	112.3	112.4	112.5
89	112.7	112.8	112.9	113.0	113.1	113.2	113.3	113.4	113.5	113.6	113.7	113.8
90	113.9	114.0	114.1	114.2	114.3	114.4	114.5	114.6	114.7	114.8	114.9	115.1
91	115.2	115.3	115.4	115.5	115.6	115.7	115.8	115.9	116.0	116.1	116.2	116.3
92	116.4	116.5	116.6	116.7	116.8	116.9	117.0	117.1	117.2	117.3	117.5	117.6
93	117.7	117.8	117.9	118.0	118.1	118.2	118.3	118.4	118.5	118.6	118.7	118.8
94	118.9	119.0	119.1	119.2	119.3	119.4	119.5	119.6	119.7	119.8	120.0	120.1
95	120.2	120.3	120.4	120.5	120.6	120.7	120.8	120.9	121.0	121.1	121.2	121.3
96	121.4	121.5	121.6	121.7	121.8	121.9	122.0	122.1	122.2	122.4	122.5	122.6
97	122.7	122.8	122.9	123.0	123.1	123.2	123.3	123.4	123.5	123.6	123.7	123.8
98	123.9	124.0	124.1	124.2	124.3	124.4	124.5	124.6	124.8	124.9	125.0	125.1
99	125.2	125.3	125.4	125.5	125.6	125.7	125.8	125.9	126.0	126.1	126.2	126.3
100	126.4	126.5	126.6	126.7	126.8	126.9	127.0	127.2	127.3	127.4	127.5	127.6

VOLTAGE INPUT SETTINGS FEET INCHES 1 2 3 5 6 2/0 CABLE 49 69.5 69 6 69 7 69.8 70.0 70.1 70.2 FOR USE WITH HASTINGS FIBER GLASS PRODUCTS 50 70.9 71.0 71.1 71.2 71.3 71.5 71.6 6714 TESTER 51 72.3 72.4 72.5 72.6 72.7 72.8 73.0 September 20, 1993 52 73.6 73.8 73.9 74.0 74.1 74.2 74.3 53 75.0 75.1 75.3 75.4 75.5 75.6 75.7 **INCHES** 54 76.4 76.5 76.7 76.8 76.9 77.0 77.1 3 10 2 8 11 55 77.8 77.9 78.0 78.2 78.3 78.4 78.5 12.2 12.4 12.6 12.9 13.1 13.3 13.5 13.8 14.0 11.9 56 79.2 79.3 79.4 79.5 79.7 79.8 79.9 14.7 14.9 15.2 15.4 15.6 15.9 16.1 16.3 16.5 16.8 57 80.6 80.7 80.8 80.9 81.0 81.2 81.3 17.5 17.7 17.9 18.2 18.4 18.6 18.9 19.1 19.3 19.6 58 82.0 82.1 82.2 82.3 82.4 82.5 82.7 20.2 20.5 20.7 20.9 21.2 21.4 21.6 21.9 22.1 22.3 59 83.6 83.9 83.3 83.5 83.7 83.8 84.0 23.0 23.2 23.5 23.7 23.9 24.2 24.4 24.6 24.9 25.1 85.0 85.3 60 84.7 84.9 85.1 85.2 85.4 25.8 26.0 26.3 26.5 26.7 26.9 27.2 27.4 27.6 27.9 61 86.1 86.2 86.4 86.5 86.6 86.7 86.8 28.6 28.8 29.0 29.3 29.5 29.7 29.9 30.2 30.4 30.6 62 87.5 87.6 87.7 87.9 88.0 88.1 88.2 31.3 31.6 31.8 32.0 32.3 32.5 32.7 32.9 33.2 33.4 89.1 89.5 63 88.9 89.0 89.2 89.4 89.6 34.1 34.3 34.6 34.8 35.0 35.3 35.5 35.7 36.0 36.2 64 90.3 90.4 90.5 90.6 90.7 90.9 91.0 36.9 37.1 37.3 37.6 37.8 38.0 38.3 38.5 38.7 39.0 65 91.9 92.2 91.7 91.8 92.0 92.1 92.4 39.6 39.9 40.1 40.3 40.6 40.8 41.0 41.3 41.5 41.7 93.3 93.4 93.6 93.7 66 93.1 93.2 93.5 43.1 43.8 44.5 42.4 42.7 42.9 43.3 43.6 44.0 44.3 67 94.4 94.6 94.7 94.8 94.9 95.0 95.1 45.2 45.4 45.7 45.9 47.0 46.1 46.3 46.6 46.8 47.3 68 95.8 95.9 96.1 96.2 96.3 96.4 96.5 48.0 48.2 48.4 48.7 48.9 49.4 49.6 49.8 49.1 50.0 69 97.2 97.3 97.4 97.6 97.7 97.8 97.9 50.7 51.0 51.2 51.4 51.7 52.1 52.4 52.6 52.8 51.9 70 98.6 98.7 98.8 98.9 99.1 99.2 99.3 53.5 53.7 54.0 54.2 54.4 54.7 54.9 55.1 55.4 55.6 71 100.0 100.1 100.2 100.3 100.4 100.6 100.7 56.3 56.5 56.7 57.0 57.2 57.4 57.7 57.9 58 1 58.4 72 101.4 101.5 101.6 101.7 101.8 101.9 102.1 60.9 59.1 59.3 59.5 59.7 60.0 60.2 60.4 60.7 61.1 73 102.8 102.9 103.0 103.1 103.2 103.3 103.4 61.8 62.1 62.3 62.5 62.7 63.0 63.2 63.4 63.7 63.9 74 104.1 104.3 104.4 104.5 104.6 104.7 104.8 64.8 65.1 65.3 65.5 65.8 66.0 66.2 64.6 66.4 66.7 75 105.5 105.6 105.8 105.9 106.0 106.1 106.2 67.4 67.6 67.8 68.1 68.3 68.5 68.8 69.0 69.2 69.4 76 106.9 107.0 107.1 107.3 107.4 107.5 107.6 70.1 70.4 70.6 70.8 71.1 71.3 71.5 71.8 72.0 72.2 77 108.5 108.9 108.3 108.4 108.6 108.8 109.0 72.9 73.1 73.4 73.6 73.8 74.1 74.3 74.5 74.8 75.0 78 109.9 110.3 109.7 109.8 110.0 110.1 110.4 75.7 75.9 76.1 76.4 76.6 76.8 77.1 77.3 77.5 77.8 79 111.6 111.1 111.2 111.3 111.4 111.5 111.8 78.5 78.7 78.9 79.1 79.4 79.6 79.8 80.1 80.3 80.5 80 112.5 112.6 112.7 112.8 112.9 113.0 113.1

FEET

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

FEET

47

48

11.7

14.5

17.2

20.0

22.8

25.6

28.3

31.1

33.9

36.6

39.4

42.2

45.0

47.7

50.5

53.3

56.0

58.8

61.6

64.4

67.1

69.9

72.7

75.5

78.2

81.0

83.8

86.5

89.3

92.1

94.9

97.6

100.4

103.2

105.9

108.7

111.5

114.3

117.0

119.8

122.6

125.3

128.1

68.2

81.2

84.0

86.8

89.5

92.3

95.1

97.9

100.6

103.4

106.2

108.9

111.7

114.5

117.3

120.0

122.8

125.6

128.4

68.3

81.5

84.2

87.0

89.8

92.5

95.3

98.1

100.9

103.6

106.4

109.2

112.0

114.7

117.5

120.3

123.0

125.8

128.6

68.4

81.7

84.5

87.2

90.0

92.8

95.6

98.3

101.1

103.9

106.6

109.4

112.2

115.0

117.7

120.5

123.3

126.0

128.8

68.6

81.9

84.7

87.5

90.2

93.0

95.8

98.6

101.3

104.1

106.9

109 6

112 4

115.2

118.0

120.7

123.5

126.3

129.0

68.7

82.2

84.9

87.7

90.5

93.2

96.0

98.8

101.6

104.3

107.1

109.9

112.6

115.4

118.2

121.0

123.7

126.5

129.3

68.8

82.4

85.2

87.9

90.7

93.5

96.2

99.0

101.8

104.6

107.3

110.1

112.9

115.6

118.4

121.2

124.0

126.7

129.5

68.9

82.6

85.4

88.2

90.9

93.7

96.5

99.2

102.0

104.8

107.6

110.3

113.1

115.9

118.7

121.4

124.2

127.0

129.7

69.0

82.8

85.6

88.4

91.2

93.9

96.7

99.5

102.2

105.0

107.8

110.6

113.3

116.1

118.9

121.7

124.4

127.2

130.0

69.1

83.1

85.8

88.6

91.4

94.2

96.9

99.7

102.5

105.3

108.0

110.8

113.6

116.3

119.1

121.9

124.7

127.4

130.2

69.3

83.3

86.1

88.9

91.6

94.4

97.2

99.9

102.7

105.5

108.3

111.0

113.8

116.6

119.3

122.1

124.9

127.7

130.4

69.4

11.5

14.2

17.0

19.8

22.6

25.3

28.1

30.9

33.6

36.4

39.2

42.0

44.7

47.5

50.3

53.0

55.8

58.6

61.4

64.1

66.9

69.7

72.5

75.2

78.0

80.8

83.5

86.3

89.1

91.9

94.6

97.4

100.2

102.9

105.7

108.5

111.3

114.0

116.8

119.6

122.3

125.1

127.9

65.3

66.7

68.1

FROM 91 TO 100 FEET. THE IDEAL READING ON THE PERCENT METER IS REDUCED TO 40 PERCENT, DUE TO THE INCREASED RESISTANCE OF THE JUMPERS AND THE LIMITED OUTPUT VOLTAGE OF THE TESTER.

114.4

115.8

117.2

118.6

120.0

121.3

122.7

124.1

125.5

126.9

114.5

115.9

117.3

118.7

120.1

121.5

122.9

124.2

125.6

127.0

8

70.4

71.8

73.2

74.6

76.0

77.3

78.7

80.1

81.5

82.9

84.3

85.7

87.0

88.4

89.8

91.2

92.6

94.0

95.4

96.7

98.1

99.5

100.9

102.3

103.7

105.1

106.4

107.8

109.2

110.6

112.0

113.4

114.8

116.2

117.5

118.9

120.3

121.7

123.1

124.5

125.9

127.2

70.3

71.7

73.1

74.5

75.8

77.2

78.6

80.0

81.4

82.8

84.2

85.5

86.9

88.3

89.7

91.1

92.5

93.9

95.2

96.6

98.0

99.4

100.8

102.2

103.6

104.9

106.3

107.7

109.1

110.5

111.9

113.3

114.6

116.0

117.4

118.8

120.2

121.6

123.0

124.4

125.7

127.1

9

70.5

71.9

73.3

74.7

76.1

77.5

78.8

80.2

81.6

83.0

84.4

85.8

87.2

88.5

89.9

91.3

92.7

94.1

95.5

96.9

98.2

99.6

101.0

102.4

103.8

105.2

106.6

108.0

109.3

110.7

112.1

113.5

114.9

116.3

117.7

119.0

120.4

121.8

123.2

124.6

126.0

127.4

10

70.6

72.0

73.4

74.8

76.2

77.6

79.0

80.3

81.7

83.1

84.5

85.9

87.3

88.7

90.0

91.4

92.8

94.2

95.6

97.0

98.4

99.8

101.1

102.5

103.9

105.3

106.7

108.1

109.5

110.8

112.2

113.6

115.0

116.4

117.8

119.2

120.5

121.9

123.3

124.7

126.1

127.5

10

11

70.8

72.1

73.5

74.9

76.3

77.7

79.1

80.5

81.8

83.2

84.6

86.0

87.4

88.8

90.2

91.5

92.9

94.3

95.7

97.1

98.5

99.9

101.3

102.6

104.0

105.4

106.8

108.2

109.6

111.0

112.3

113.7

115.1

116.5

117.9

119.3

120.7

122.0

123.4

124.8

126.2

127.6

11

40 PERCENT

	FROM 46 TO 90 FEET, THE IDEAL READING ON THE PERCENT METER IS											91	102.2	102.3	102.3	102.4	102.5	102.6	102.7	102.8	102.9	103.0	103.1	103.2
R	REDUCED TO 50 PERCENT, DUE TO THE INCREASED RESISTANCE OF THE											92	103.3	103.4	103.5	103.5	103.6	103.7	103.8	103.9	104.0	104.1	104.2	104.3
	JUMF	PERS AN	ID THE L	IMITED (OUTPUT	VOLTAG	E OF TH	IE TESTE	ER.			93	104.4	104.5	104.6	104.7	104.7	104.8	104.9	105.0	105.1	105.2	105.3	105.4
												94	105.5	105.6	105.7	105.8	105.9	105.9	106.0	106.1	106.2	106.3	106.4	106.5
				50	PERCEN	T						95	106.6	106.7	106.8	106.9	107.0	107.1	107.2	107.2	107.3	107.4	107.5	107.6
												96	107.7	107.8	107.9	108.0	108.1	108.2	108.3	108.4	108.4	108.5	108.6	108.7
	INC	CHES										97	108.8	108.9	109.0	109.1	109.2	109.3	109.4	109.5	109.6	109.6	109.7	109.8
	1	2	3	4	5	6	7	8	9	10	11	98	109.9	110.0	110.1	110.2	110.3	110.4	110.5	110.6	110.7	110.8	110.8	110.9
3	65.4	65.6	65.7	65.8	65.9	66.0	66.1	66.3	66.4	66.5	66.6	99	111.0	111.1	111.2	111.3	111.4	111.5	111.6	111.7	111.8	111.9	112.0	112.0
7	66.8	66.9	67.1	67.2	67.3	67.4	67.5	67.6	67.8	67.9	68.0	100	112.1	112.2	112.3	112.4	112.5	112.6	112.7	112.8	112.9	113.0	113.1	113.2

FEET

81

82

83

84

85

86

87

88

89

90

113.8

115.2

116.6

118.0

119.4

120.8

122.2

123.5

124.9

126.3

114.0

115.3

116.7

118.1

119.5

120.9

122.3

123.7

125.0

126.4

114.1

115.5

116.8

118.2

119.6

121.0

122.4

123.8

125.2

126.5

INCHES

114.2

115.6

117.0

118.3

119.7

121.1

122.5

123.9

125.3

126.7

3

114.3

115.7

117.1

118.5

119.8

121.2

122.6

124.0

125.4

126.8

VOLTAGE INPUT SETTINGS 4/0 CABLE

FOR USE WITH HASTINGS FIBER GLASS PRODUCTS 6714 TESTER September 20, 1993

FEET INCHES 3 7 8 9 10 11 2 5 10.2 10.4 10.6 10.8 11.0 11.2 11.4 11.6 11.8 11.9 12.1 12.3 3 12.5 12.7 12.9 13.1 13.3 13.5 13.7 13.9 14.0 14.2 14.4 14.6 14.8 15.0 15.2 15.4 15.6 15.8 15.9 16.1 16.3 16.5 16.7 16.9 17.3 17.5 17.7 17.9 18.0 18.2 18.4 18.8 19.0 19.2 17.1 18.6 20.1 20.3 20.5 20.7 20.9 21.3 21.5 19.4 19.6 19.8 20.0 21.1 21.7 21.9 22.1 22.2 22.4 22.6 22.8 23.0 23.2 23.4 23.6 23.8 24.0 24.2 24.3 24.5 24.7 24.9 25.1 25.3 25.5 25.7 25.9 26.1 10 26.3 26.4 26.6 26.8 27.0 27.2 27.4 27.6 27.8 28.0 28.2 28.3 11 28.5 28.7 28.9 29.1 29.3 29.5 29.7 29.9 30.1 30.3 30.4 30.6 12 30.8 31.0 31.2 31.4 31.6 31.8 32.0 32.2 32.4 32.5 32.7 32.9 34.3 13 33.1 33.3 33.5 33.7 33.9 34.1 34.5 34.6 34.8 35.0 35.2 14 35.4 35.8 36.0 36.4 36.6 36.7 36.9 37.1 37.3 37.5 35.6 36.2 15 37.7 38.1 38.3 38.5 38.6 38.8 39.0 39.2 39.4 39.6 39.8 37.9 40.0 40.4 40.6 40.7 40.9 41.1 41.3 41.5 41.7 41.9 42.1 16 40.2 17 42.3 42.5 42.7 42.8 43.0 43.2 43.4 43.6 43.8 44.0 44.2 44.4 18 44.6 44.8 44.9 45.1 45.3 45.5 45.7 45.9 46.1 46.3 46.5 46.7 19 46.9 47.0 47.2 47.4 47.6 47.8 48.0 48.2 48.4 48.6 48.8 48.9 20 49.1 49.3 49.5 49.7 49.9 50.1 50.3 50.5 50.7 50.9 51.0 51.2 21 52.0 52.4 52.6 53.0 53.1 53.5 51.4 51.6 51.8 52.2 52.8 53.3 22 53.7 53.9 54.1 54.3 54.5 54.7 54.9 55.1 55.2 55.4 55.6 55.8 23 56.0 56.2 56.4 56.6 56.8 57.0 57.2 57.3 57.5 57.7 57.9 58.1 24 58.3 58.5 58.7 58.9 59.1 59.2 59.4 59.6 59.8 60.0 60.2 60.4 25 60.6 60.8 61.0 61.2 61.3 61.5 61.7 61.9 62.1 62.3 62.5 62.7 26 64.2 64.6 65.0 62.9 63.1 63.3 63.4 63.6 63.8 64.0 64.4 64.8 27 65.2 65.4 65.5 65.7 65.9 66.1 66.3 66.5 66.7 66.9 67.1 67.3 28 67.5 67.6 67.8 68.0 68.2 68.4 68.6 68.8 69.0 69.2 69.4 69.6 29 69.7 69.9 70.1 70.3 70.5 70.7 70.9 71.1 71.3 71.5 71.6 71.8 30 72.0 72.2 72.4 72.6 72.8 73.0 73.2 73.4 73.6 73.7 73.9 74.1 31 74.3 74.5 74.7 74.9 75.1 75.3 75.5 75.7 75.8 76.0 76.2 76.4 32 76.6 76.8 77.0 77.2 77.4 77.6 77.8 77.9 78.1 78.3 78.5 78.7 33 78.9 79.5 79.7 80.0 80.2 80.4 80.6 80.8 81.0 79.1 79.3 79.9 34 82.5 82.7 82.9 81.2 81.4 81.6 81.8 81.9 82.1 82.3 83.1 83.3 35 83.7 83.9 84.0 84.2 84.4 84.6 84.8 85.0 85.2 85.4 85.6 83.5 36 85.8 86.1 86.3 86.5 86.7 86.9 87.3 87.5 87.9 86.0 87.1 87.7 37 88.1 88.4 88.6 88.8 89.0 89.2 89.6 89.8 90.2 88.2 89.4 90.0 90.7 90.9 91.5 92.1 92.2 92.4 38 90.3 90.5 91.1 91.3 91.7 91.9 39 92.6 92.8 93.0 93.2 93.4 93.6 93.8 94.0 94.2 94.3 94.5 94.7 40 94.9 95.1 95.3 95.5 95.7 95.9 96.1 96.3 96.4 96.6 96.8 97.0 41 97.2 97.4 97.6 97.8 98.0 98.2 98.4 98.5 98.7 98.9 99.1 99.3 42 99.5 99.7 99.9 100.1 100.3 100.5 100.6 100.8 101.0 101.2 101.4 101.6 43 101.8 102.0 102.2 102.4 102.6 102.7 102.9 103.1 103.3 103.5 103.7 103.9 44 104.5 105.0 105.4 105.6 105.8 106.2 104.1 104.3 104.6 104.8 105.2 106.0 45 106.4 106.6 106.7 106.9 107.1 107.3 107.5 107.7 107.9 108.1 108.3 108.5 46 108.7 108.8 109.0 109.2 109.4 109.6 109.8 110.0 110.2 110.4 110.6 110.8 47 110.9 111.1 111.3 111.5 111.7 111.9 112.1 112.3 112.5 112.7 112.9 113.0 48 113.2 113.4 113.6 113.8 114.0 114.2 114.4 114.6 114.8 114.9 115.1 115.3 49 115.5 115.7 115.9 116.1 116.3 116.5 116.7 116.9 117.0 117.2 117.4 117.6 50 117.8 118.0 118.2 118.4 118.6 118.8 119.0 119.1 119.3 119.5 119.7 119.9 51 120.1 120.3 120.5 120.7 120.9 121.2 121.4 121.8 122.0 122.2 121.1 121.6 52 122.4 122.6 122.8 123.0 123.2 123.3 123.5 123.7 123.9 124.1 124.3 124.5 53 124.9 125.1 125.2 125.4 125.6 125.8 126.0 126.2 126.4 126.6 126.8 124.7 54 128.1 128.5 128.7 127.2 127.3 127.5 127.7 127.9 128.3 128.9 129.1 127.0

55

129.3

129.4

129.6

129.8

130.0

130.2

130.4

130.6

130.8

131.0

131.2

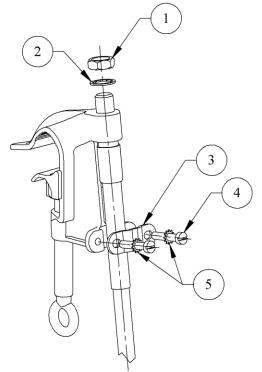
131.4

FROM 56 TO 100 FEET, THE IDEAL READING ON THE PERCENT METER IS REDUCED TO 50 PERCENT, DUE TO THE INCREASED RESISTANCE OF THE JUMPERS AND THE LIMITED OUTPUT VOLTAGE OF THE TESTER.

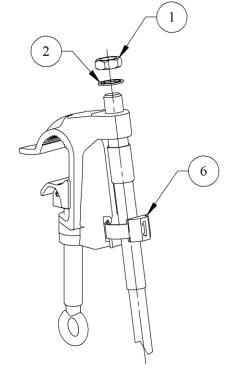
50 PERCENT

					•							
FEET		IN	ICHES									
		1	2	3	4	5	6	7	8	9	10	11
56	65.8	65.9	66.0	66.1	66.2	66.2	66.3	66.4	66.5	66.6	66.7	66.8
57	66.9	67.0	67.1	67.2	67.3	67.4	67.5	67.6	67.7	67.8	67.9	68.0
58	68.1	68.2	68.3	68.3	68.4	68.5	68.6	68.7	68.8	68.9	69.0	69.1
59	69.2	69.3	69.4	69.5	69.6	69.7	69.8	69.9	70.0	70.1	70.2	70.3
60	70.4	70.4	70.5	70.6	70.7	70.8	70.9	71.0	71.1	71.2	71.3	71.4
61	71.5	71.6	71.7	71.8	71.9	72.0	72.1	72.2	72.3	72.4	72.4	72.5
62	72.6	72.7	72.8	72.9	73.0	73.1	73.2	73.3	73.4	73.5	73.6	73.7
63	73.8	73.9	74.0	74.1	74.2	74.3	74.4	74.5	74.5	74.6	74.7	74.8
64	74.9	75.0	75.1	75.2	75.3	75.4	75.5	75.6	75.7	75.8	75.9	76.0
65	76.1	76.2	76.3	76.4	76.5	76.5	76.6	76.7	76.8	76.9	77.0	77.1
66	77.2	77.3	77.4	77.5	77.6	77.7	77.8	77.9	78.0	78.1	78.2	78.3
67	78.4	78.5	78.6	78.6	78.7	78.8	78.9	79.0	79.1	79.2	79.3	79.4
68	79.5	79.6	79.7	79.8	79.9	80.0	80.1	80.2	80.3	80.4	80.5	80.6
69	80.7	80.7	80.8	80.9	81.0	81.1	81.2	81.3	81.4	81.5	81.6	81.7
70	81.8	81.9	82.0	82.1	82.2	82.3	82.4	82.5	82.6	82.7	82.7	82.8
71	82.9	83.0	83.1	83.2	83.3	83.4	83.5	83.6	83.7	83.8	83.9	84.0
72	84.1	84.2	84.3	84.4	84.5	84.6	84.7	84.8	84.8	84.9	85.0	85.1
73	85.2	85.3	85.4	85.5	85.6	85.7	85.8	85.9	86.0	86.1	86.2	86.3
74	86.4	86.5	86.6	86.7	86.8	86.8	86.9	87.0	87.1	87.2	87.3	87.4
75	87.5	87.6	87.7	87.8	87.9	88.0	88.1	88.2	88.3	88.4	88.5	88.6
76	88.7	88.8	88.9	88.9	89.0	89.1	89.2	89.3	89.4	89.5	89.6	89.7
77	89.8	89.9	90.0	90.1	90.2	90.3	90.4	90.5	90.6	90.7	90.8	90.9
78	91.0	91.0	91.1	91.2	91.3	91.4	91.5	91.6	91.7	91.8	91.9	92.0
79	92.1	92.2	92.3	92.4	92.5	92.6	92.7	92.8	92.9	93.0	93.0	93.1
80	93.2	93.3	93.4	93.5	93.6	93.7	93.8	93.9	94.0	94.1	94.2	94.3
81 82	94.4 95.5	94.5 95.6	94.6 95.7	94.7 95.8	94.8 95.9	94.9 96.0	95.0 96.1	95.1 96.2	95.1 96.3	95.2 96.4	95.3 96.5	95.4 96.6
82 83	95.5 96.7	95.6 96.8	95.7 96.9	95.6 97.0	95.9 97.1	96.0 97.2	96.1	96.2	96.3 97.4	96.4 97.5	96.5 97.6	96.6
84	96.7 97.8	96.8 97.9	98.0	97.0 98.1	98.2	98.3	97.2 98.4	97.3 98.5	98.6	97.5 98.7	98.8	98.9
85	99.0	99.1	99.2	99.2	99.3	99.4	99.5	99.6	99.7	99.8	99.9	100.0
86	100.1	100.2	100.3	100.4	100.5	100.6	100.7	100.8	100.9	101.0	101.1	101.2
87	101.3	101.3	101.4	101.5	101.6	101.7	101.8	101.9	102.0	101.0	101.1	102.3
88	101.3	101.5	102.6	101.3	101.8	102.9	103.0	101.3	103.2	103.3	103.3	103.4
89	103.5	103.6	103.7	103.8	103.9	104.0	104.1	104.2	104.3	104.4	104.5	104.6
90	104.7	104.8	104.9	105.0	105.1	105.2	105.3	105.4	105.4	105.5	105.6	105.7
91	105.8	105.9	106.0	106.1	106.2	106.3	106.4	106.5	106.6	106.7	106.8	106.9
92	107.0	107.1	107.2	107.3	107.4	107.5	107.5	107.6	107.7	107.8	107.9	108.0
93	108.1	108.2	108.3	108.4	108.5	108.6	108.7	108.8	108.9	109.0	109.1	109.2
94	109.3	109.4	109.5	109.5	109.6	109.7	109.8	109.9	110.0	110.1	110.2	110.3
95	110.4	110.5	110.6	110.7	110.8	110.9	111.0	111.1	111.2	111.3	111.4	111.5
96	111.6	111.6	111.7	111.8	111.9	112.0	112.1	112.2	112.3	112.4	112.5	112.6
97	112.7	112.8	112.9	113.0	113.1	113.2	113.3	113.4	113.5	113.6	113.7	113.7
98	113.8	113.9	114.0	114.1	114.2	114.3	114.4	114.5	114.6	114.7	114.8	114.9
99	115.0	115.1	115.2	115.3	115.4	115.5	115.6	115.7	115.7	115.8	115.9	116.0
100	116.1	116.2	116.3	116.4	116.5	116.6	116.7	116.8	116.9	117.0	117.1	117.2

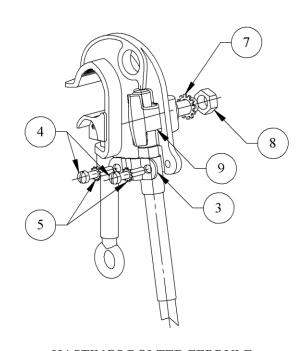
Replacement Parts for Hastings Grounding Clamps



HASTINGS 5/8-11 THREADED TERMINAL GROUND CLAMPS W/METAL CABLE STRAP



HASTINGS 5/8-11 THREADED TERMINAL GROUND CLAMPS W/PLASTIC CABLE STRAP



HASTINGS BOLTED FERRULE GROUND CLAMPS

1	9	5-20116	EYE BOLT
1	8	1-04261	NUT
1	7	1-07457	LOCK WASHER
1	6	P16703	PLASTIC TIE CLAMP
2	5	1-07447	LOCK WASHER
2	4	1-05185	SCREW
1	3	P31008	METAL CABLE STRAP
1	2	1-07832	LOCK WASHER
1	1	1-04270	BRONZE HEX NUT
QTY.	ITEM NO.	PART NO.	DESCRIPTION

Refer to page O-8 for ferrules and cables.

Refer to page O-8-1 for ferrules with heat shrink.

Contact your Hastings representative or the factory if you need help in identifying parts needed for repair or replacement.

HASTINGS FIBER GLASS PRODUCTS, INC P.O. BOX 218, 770 COOK ROAD HASTINGS, MI 49058 tel (269) 945-9541 fax (269) 945-4623