Rolling Chair Scale

Models 6880 & 6880KGEU

Operating Instructions

0064-M020-O1 Rev B
03/05

CARDINAL SCALE MFG. CO.
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Printed in USA

EUROPEAN DECLARATION OF CONFORMITY

Manufacturer: Cardinal Scale Manufacturing Company
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Webb City, Missouri 64870 USA

Telephone No. 417 673 4631
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Product: Non-automatic Weight Indicating Instrument
Model Numbers 758CSV
Serial Number EXXXYY-ZZZ
where XXX = day of year
YY = last two digits of year
ZZZ = sequential number

The undersigned hereby declares, on behalf of Cardinal Scale Manufacturing Company of Webb City, Missouri, that the above-referenced product, to which this declaration relates, is in conformity with the provisions of:

Council Directive 73/23/EEC (19 February, 1993) Low Voltage Directive as amended by Council Directive 93/68/EEC (22 July, 1993)

Test Report Number 0206-1 Cardinal Scale Mfg. Co.

European Standard EN55022: Class B for radiated emissions

European Standard EN61000-4-3: Class A for Radiated EMC

European Standard EN61000-4-6: Class A for Conducted Disturbances

Test Report Number 020424-537 Criterion Technology

The Technical Construction File required by this Directive is maintained at the corporate headquarters of Cardinal Scale Manufacturing Company, 203 East Daugherty, Webb City, Missouri.

Link Yeager
Director, Quality Assurance

COMPATIBILITY OF MODULES

Ref.: WELMEC 2 (2000)

Non-Automatic Weighing Instrument, single-interval.

Certificate of EU Type-Approval N°: TAC: UK2655

INDICATOR A/D (Module 1)	Type:	758CSV				
Accuracy class according to EN 45501 and OIML R76:		$Class_{ind}$	(I, II, III or IIII)		III	
Maximum number of verification scale intervals (n_{max}):		n_{ind}			5000	
Fraction of maximum permissible error (mpe):		p_1			0.5	
Load cell excitation voltage:		U_{exc}	(Vdc)		5	
Minimum input-voltage per verification scale interval:		Δu_{min}	(µV)		1.2	
Minimum load cell impedance:		R_{Lmin}	(Ω)		87	
Coefficient of temperature of the span error:		Es	(% / 25°C)			0.006
Coefficient of resistance for the wires in the J-box cable:		Sx	(% / Ω)			0.0152
Specific J-box cable-Length to the junction box for load cells:		$(L/A)_{max}$	(m / mm²)			175
Load cell interface:			4-wire (no sense)			
Additive tare, if available:		T^+	(% of Max)		0	
Initial zero setting range:		IZSR	(% of Max)	-2	/	2
Temperature range:		T_{min} / T_{max}	(°C)	-10	/	40
Test report (TR), Test Certificate (TC) or OIML Certificate of Conformity:		NWML GB-1136				
LOAD RECEPTOR (Module 2)	Type:	6880KGEU				
Construction:			Platform			
Fraction of mpe:		p_2			0.5	
Number of load cells:		N			1	
Reduction ratio of the load transmitting device:		$R=F_M / F_L$			1	
Dead load of load receptor:		DL	(% of Max)		7	
Non uniform distribution of the load: (NUD = 0 is acceptable)		NUD	(% of Max)		0	
Correction factor:	$Q = 1 + (DL + T^+ + IZSR^+ + NUD) / 100$				1.09	
LOAD CELL ANALOG (Module 3)	Type:	TSSP-200KG				
Accuracy class according to OIML R60:		$Class_{LC}$	(A, B, C or D)		C	
Maximum number of load cell intervals:		n_{LC}			3000	
Fraction of mpe:		p_3			0.7	
Rated output (sensitivity):		C	(mV / V)		2	
Input resistance of single load cell:		R_{LC}	(Ω)		350	
Minimum load cell verification interval: ($v_{min\%}$ = 100 / Y)		$v_{min\%}$	(% of Emax)		0.0125	
Rated capacity:		E_{max}	(kg)		230	
Minimum dead load, relative:	$(E_{min} / E_{max}) * 100$		(%)		0	
Temperature range:		T_{min} / T_{max}	(°C)	-10	/	40
Test report (TR) or Test Certificate (TC/OIML) as appropriate:		R60/1991-NL-00.02 Rev. 1 pend				
COMPLETE WEIGHING INSTRUMENT			**Single-interval**			
Manufacturer: Detecto	Type:	6880KGEU				
Accuracy class according to EN 45501 and OIML R76:		$Class_{WI}$	(I, II, III or IIII)		III	
Fractions: $p_i = p_1^2 + p_2^2 + p_3^2$:		p_i			1.0	
Maximum capacity:		Max	(kg)		200	
Number of verification scale intervals:		n			2000	
Verification scale interval:		e	(kg)		0.1	
Utilisation ratio of the load cell:	$\alpha = (Max / E_{max}) * (R / N)$				0.87	
Input voltage (from the load cells):	$\Delta_u = C * U_{exc} * \alpha * 1000 / n$		(µV/e)		4.35	
Cross-section of each wire in the J-box cable:		A	(mm²)		0.22	
J-box cable-Length:		L	(m)		81	
Temperature range to be marked on the instrument: Not required		T_{min} / T_{max}	(°C)			
Peripheral Equipment subject to legal control:						

Acceptance criteria for compatibility				Passed, provided no result below is < 0	
$Class_{WI}$	<=	$Class_{ind}$ & $Class_{LC}$	(WELMEC 2: 1)	$Class_{WI}$:	**PASSED**
pi	<=	1	(R76: 3.5.4.1)	1 - pi =	**0.0**
n	<=	n_{max} for the class	(R76: 3.2)	n_{max} for the class - n =	**8000**
n	<=	n_{ind}	(WELMEC 2: 4)	n_{ind} - n =	**3000**
n	<=	n_{LC}	(R76: 4.12.2)	n_{LC} - n =	**1000**
E_{min}	<=	DL * R / N	(WELMEC 2: 6d)	(DL * R / N) - E_{min} =	**14**
$v_{min} \cdot \sqrt{N} / R$	<=	e	(R76: 4.12.3)	e - (v_{min} * √N / R) =	**0.071**
or (if v_{min} is not given)				Alternative solutions: ↑ ↓	
$(E_{max} / n_{LC}) \cdot (\sqrt{N} / R)$	<=	e	(WELMEC 2: 7)	e - ((E_{max} / n_{LC}) * (√N/ R)) =	
Δu_{min}	<=	Δu	(WELMEC 2: 8)	Δu – Δu_{min} =	**3.15**
R_{Lmin}	<=	R_{LC} / N	(WELMEC 2: 9)	(R_{LC} / N) - R_{Lmin} =	**263**
L / A	<=	$(L / A)_{max}^{WI}$	(WELMEC 2: 10)	$(L / A)_{max}^{WI}$ - (L / A) =	**245**
T_{range}	<=	T_{max} - T_{min}	(R76: 3.9.2.2)	(T_{max} - T_{min}) - T_{range} =	**20**
Q * Max * R / N	<=	E_{max}	(R76: 4.12.1)	E_{max} - (Q * Max * R / N) =	**12.0**

Signature and date:

Conclusion . . . . . ***PASSED***

This is an authentic document made from the program:
"Compatibility of NAWI-modules version 3.0".

ROLLING CHAIR SCALE

Thank you for purchasing our Model 6880 (6880KGEU) Rolling Chair Scale. It has been manufactured with quality and reliability at our factory in Webb City, MO USA. Your scale has been tested before leaving our factory to insure accuracy and dependability for years to come.

This manual is provided to guide you through the operation of your scale. Please read it thoroughly before attempting to operate your scale and keep it handy for future reference.

FCC COMPLIANCE STATEMENT

WARNING! This equipment generates, uses and can radiate radio frequency and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user will be responsible to take whatever measures necessary to correct the interference.

You may find the booklet "How to Identify and Resolve Radio TV Interference Problems" prepared by the Federal Communications Commission helpful. It is available from the U.S. Government Printing Office, Washington, D.C. 20402, stock No. 001-000-00315-4.

SPECIFICATIONS

	6880	6880KGEU
Capacity …….……	440 lb x .2 lb (200 kg x .1 kg)	200 kg x .1 kg
Display ..……..	0.7” / 18 mm high-contrast 7-segment LCD with Body Mass Index	
Power ..……...	6 “C” size alkaline batteries or optional AC adapter	
Keys ..……..	On/Off, Zero, Units, Lock/Release, Net/Gross, Tare and ID/Height	
Display Functions ……	Auto power off, Lock/Release of display, Motion detection and Body Mass Index Calculator	

FEATURES

- Fully electronic – single load cell
- Oversized 3” high wheels
- Zero turning radius ability
- Safety stops on rear wheels for parking in one place without rolling
- Contoured, sloping backrest allows the patient to assume a relaxed position
- Soft, padded lift-a-way armrest for ease in transferring patients to the scale and to accommodate patients with casts
- Fold up footrest to promote patient security when getting into or out of the scale.

UNPACKING INSTRUCTIONS

Cut packing straps securing the shipping box.

Remove indicator (packed in separate box) from chair scale seat and set aside.

To remove scale from the box, lift up with equal force on the padded handles and at the lower frame. Set gently on floor. DO NOT lift scale by chair seat.

Remove all plastic wrapping, foam fillers and cardboard material from the scale.

Check for any damage incurred in shipping. If scale has been damaged, place a claim with the carrier. *It is the responsibility of the purchaser to file all claims for any damages or loss incurred during transit*. Use the original carton and shipping material to return the scale.

Remove and unpack the power supply and cord, if the scale was ordered with this option.

CARE and CLEANING of SCALE

DO NOT subject the platform to sudden shocks.

DO NOT spray water directly on the display head.

DO avoid areas where the scale might be exposed to moisture.

DO NOT use abrasive cleaners on this instrument.

DO NOT use acetone or other volatile solvents for cleaning.

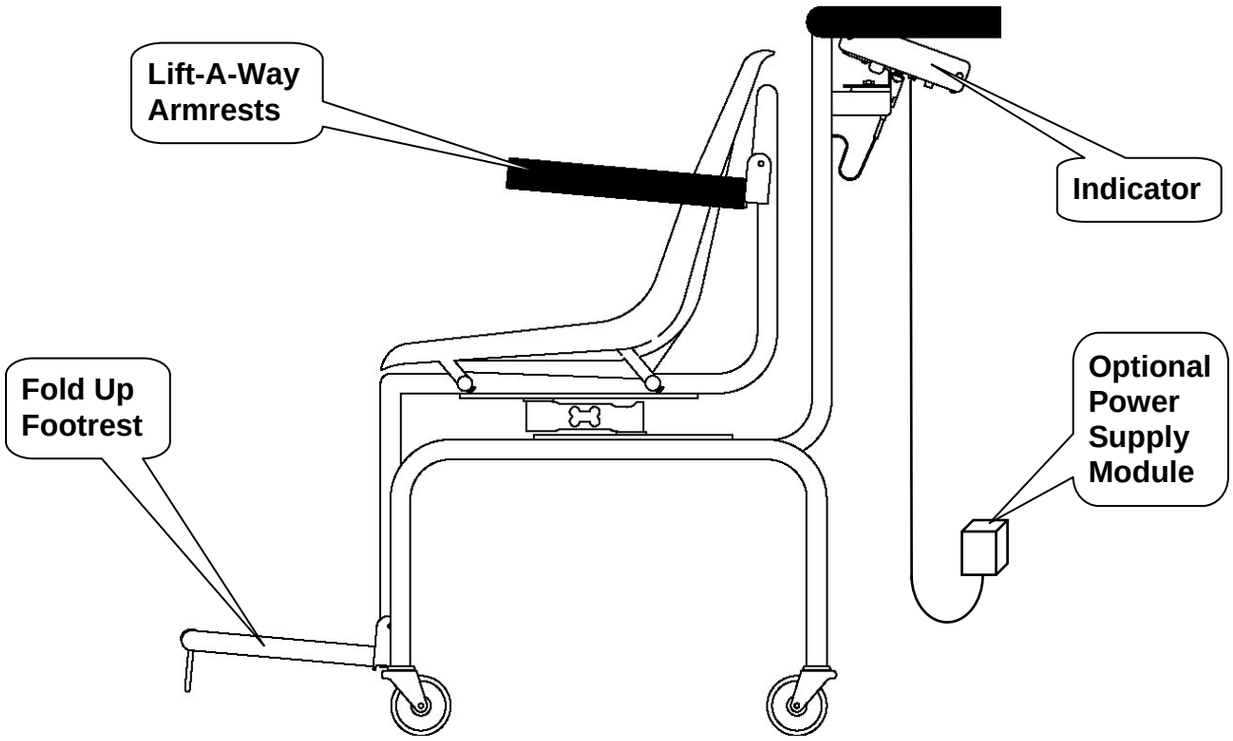
DO clean the scale using a damp soft cloth and mild detergent.

ERROR and STATUS DISPLAYS

Display	Meaning
-Err-	General error, invalid keypad entry was attempted.
-OF-	Attempting to display a negative number greater than –9,999 or a positive number greater than 99,999
-trL-	Indicates an attempt to zero a weight outside the scale zero range. (See Four Percent Zero Tracking Range Limit).
-UnS-	Motion is present when the indicator is attempting to perform one of the following operations: Power Up Zero or Zero Weight Display
AdErr	An analog to digital converter communication error has been detected. Consult the scale service representative.
CALib	Indicates improper stored calibration data, calibration is necessary.
ErrA	The analog to digital sample is invalid.
ErrAL	The load cell input is below the range of the indicator.
ErrAH	The load cell input is above the range of the indicator.
EE Err	NOVRAM failure. Consult the scale service representative.
OCAP	Scale weight exceeds scale capacity
OFF	Displayed to indicate the indicator is turning off.

OPERATING INSTRUCTIONS

WARNING - This product is <u>not</u> intended for use in transporting patients! It is to be used ONLY for weighing a patient. Failure to observe this warning may result in serious injury to the patient and/or the scale operator.



1. Install six (6) “C” size batteries or if ordered with the scale, plug the power supply module into an appropriate power receptacle, then plug the small connector end of the power supply cord into the power jack located in the bottom right corner at the back of the indicator.
2. Install the indicator on the scale bracket (between the padded handles) and then connect the load cell cable.

NOTE! For more information on installing the batteries (or the power supply module), mounting the indicator on the scale bracket and connecting the load cell cable, refer to the 758C Series Operation Manual, 8555-M210-O1.

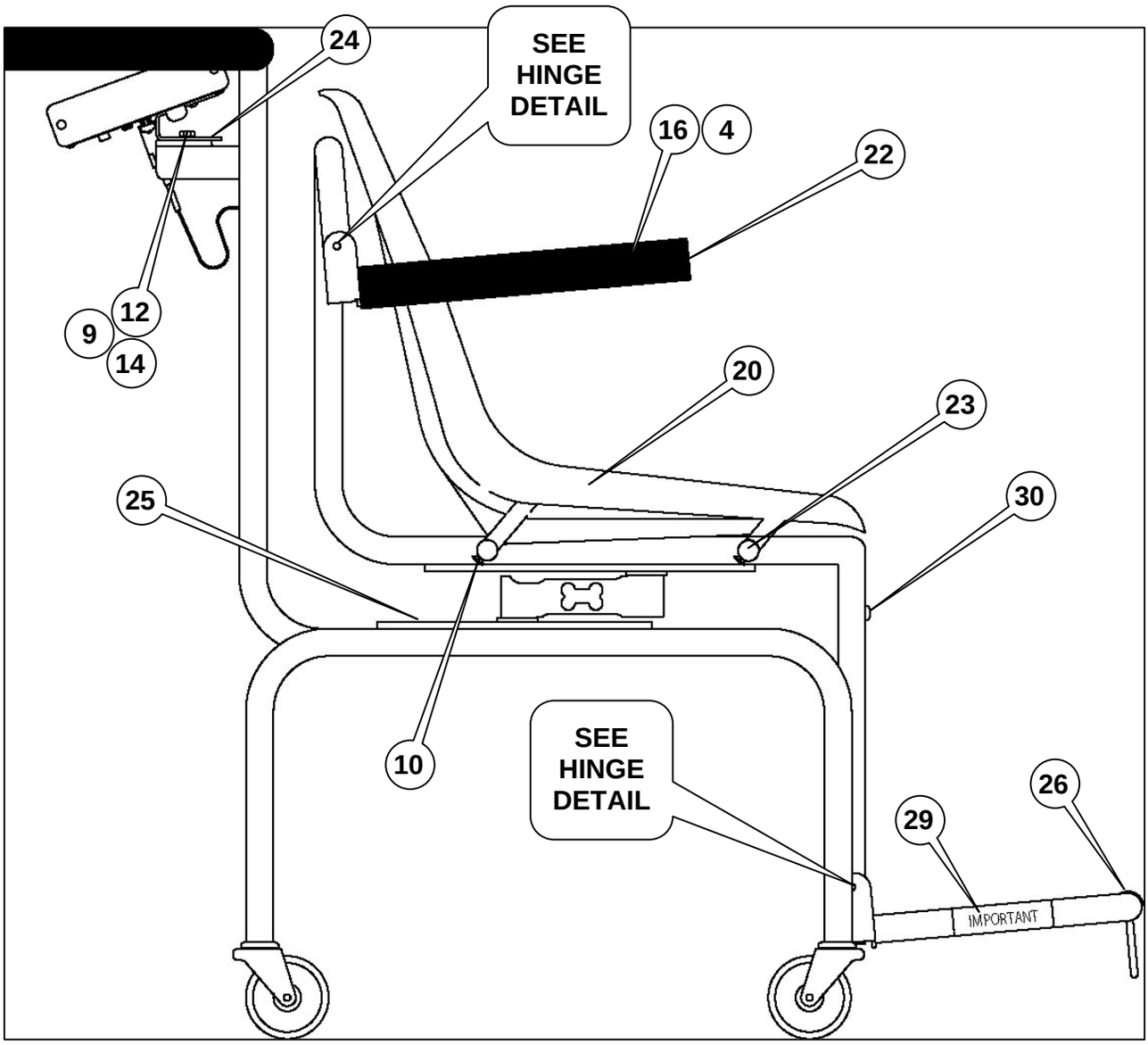
3. Place the chair scale on any hard, level, flat surface or low-cut carpet.
4. With no weight on the scale, press the **[ON/OFF]** key. After a second or so the display should indicate a zero weight with the ZERO annunciator turned on. If the display does not indicate zero, press the **[ZERO]** key to zero the weight display.
5. Set the patient on the scale and have them remain motionless for several seconds until the scale display shows their weight.

IMPORTANT!

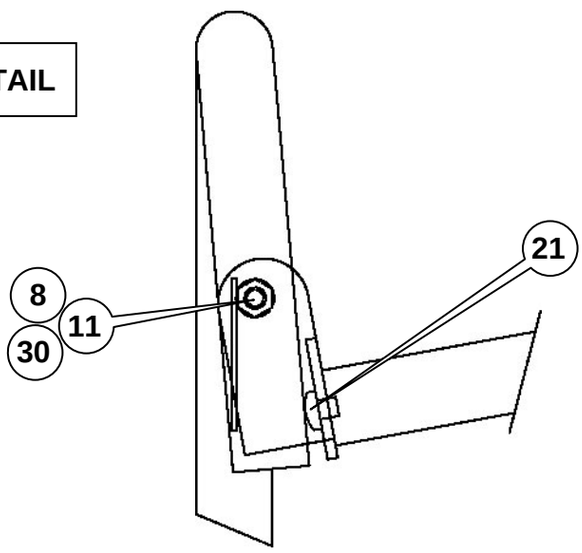
Lower footrest after patient is seated.
Raise footrest before patient stands up.
NEVER STAND UPRIGHT ON FOOTREST!

6. To re-zero the scale, remove the patient from the scale and press the **[ZERO]** key.

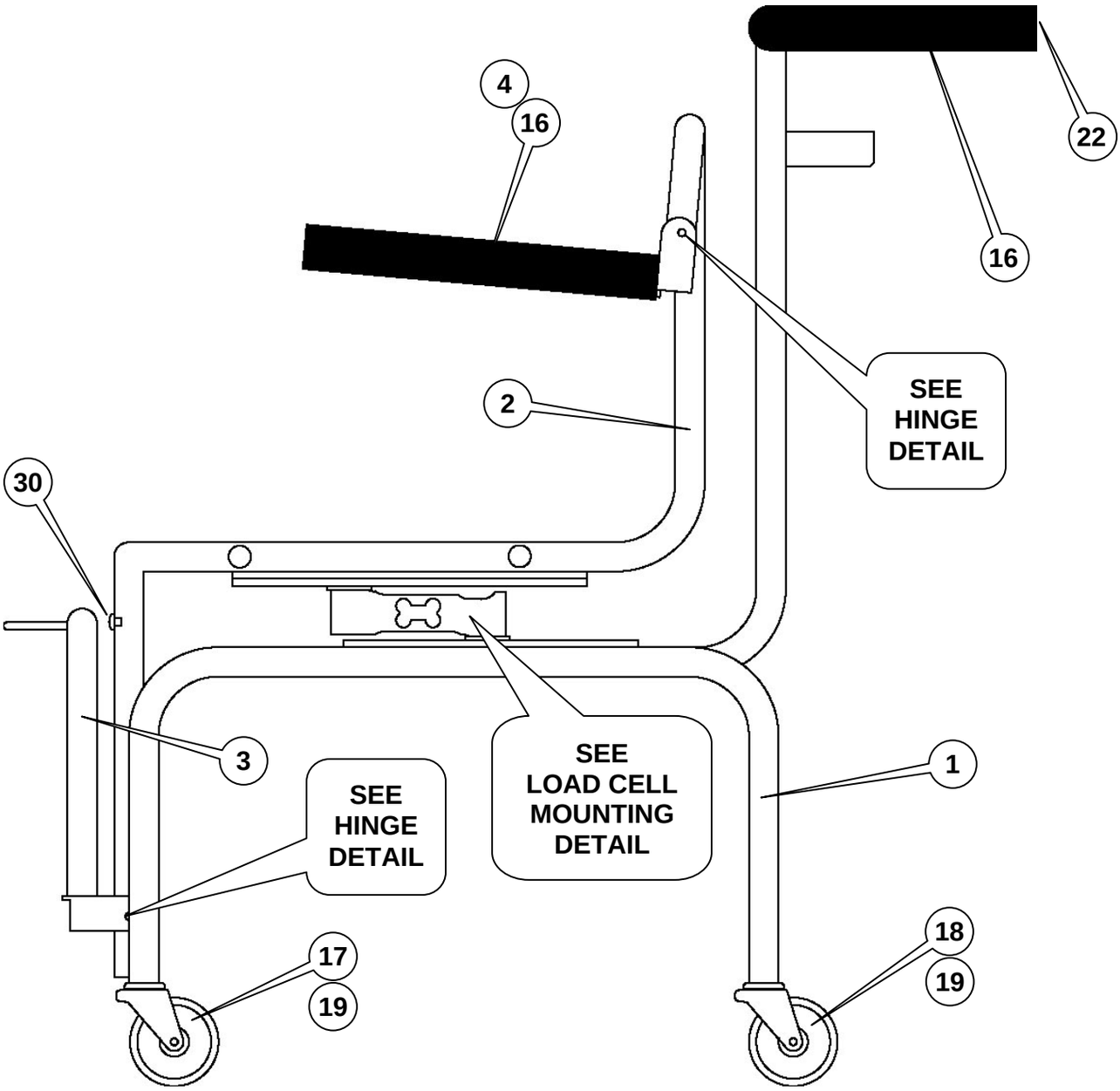
PART IDENTIFICATION



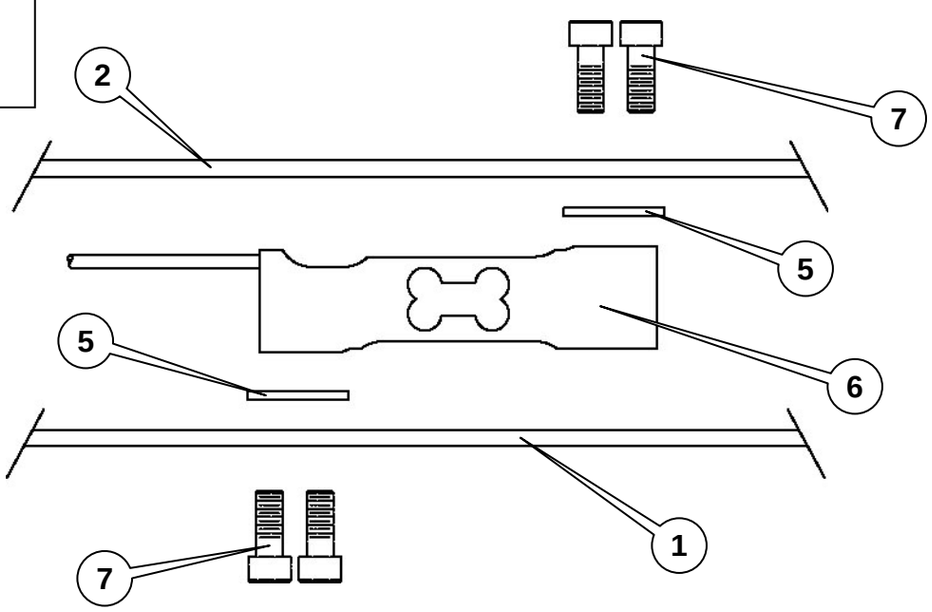
HINGE DETAIL



PART IDENTIFICATION



LOAD CELL MOUNTING DETAIL



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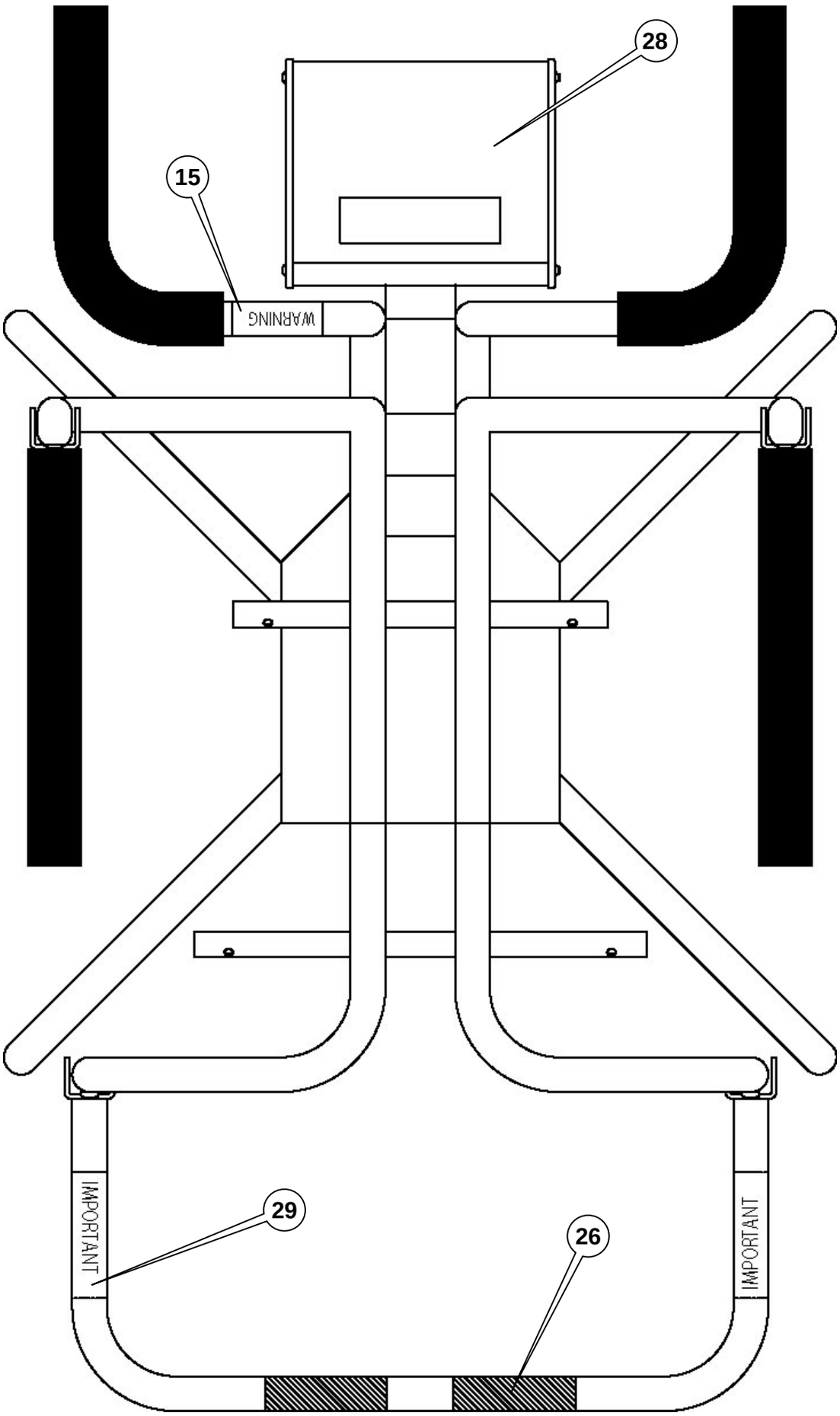

PART IDENTIFICATION

ITEM #	QTY	PART NUMBER	DESCRIPTION
1	1	0064-D002-0A	LOWER FRAME WELDMENT
2	1	0064-D003-0A	UPPER FRAME WELDMENT
3	1	0064-C013-0A	FOOT REST WELDMENT
4	2	0064-B011-0A	ARM REST WELDMENT
5	2	0049-B028-08	SPACER
6	1	2950-C138-1A	LOAD CELL
7	4	6021-1313	SCW SOC HD CAP M10 X 1.5 X 22mm
8	4	6021-1432	SCW PAN HEAD 1/4-20UNC-2A X 1 3/4” LG. PHIL.
9	1	6021-1454	SCW HX HD 1/4-20UNC-2A X .75
10	4	6021-1101	SCW OVAL HD #12 X 1.5
11	16	6680-0030	WASHER FLAT 1/4” NYLON
12	1	391RV204	NUT HEX ELASTIC 1/4-20UNC-2B
14	1	6024-0004	WASHER FLAT 1/4
15	1	0046-B268-08	WARNING LABEL
16	4	6540-1070	GRIP FOAM
17	2	6540-1043	CASTER SWIVEL
18	2	6540-1044	CASTER SWIVEL W/BRAKE
19	4	6540-1045	SOCKET FOR CASTERS
20	1	6540-1103	CHAIR SHELL BLACK
21	6	6540-1094	STEM BUMPER
22	8	6450-1149	VINYL CAP 1” DIA
23	4	6540-1148	VINYL CAP 3/4” DIA
24	1	0033-B164-08	INDICATOR MOUNT
25	1	593GR986	SERIAL TAG
26	2	0064-B016-08	MAT FOOT REST
27	5	6980-0014	CABLE TIE 6” WHITE
28	REF	758C/758CSV	INDICATOR
29	2	203R908	CAUTION LABEL
30	4	6013-0420	NUT ACORN HEX 1/4-20UNC-2B
		728R121	AC ADAPTER 115VAC to 12VDC @ 300 mA
		728R901	AC ADAPTER 230VAC to 14VDC @ 300 mA


DESIGNED & MANUFACTURED IN U.S.A.