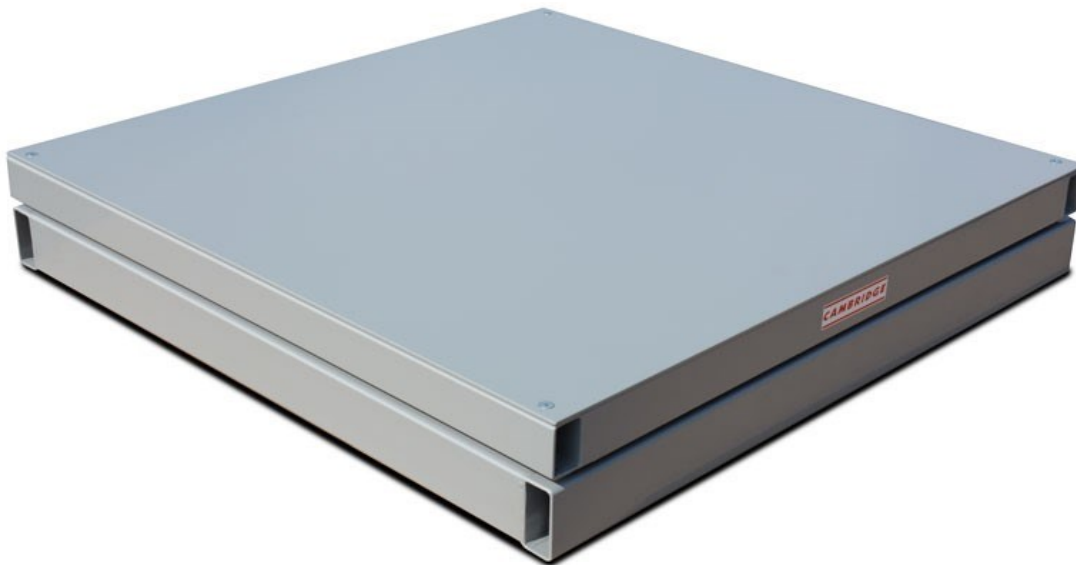


C A M B R I D G E

SCALE WORKS, INC.

**Model: CSFB Flexure Base
Installation, Set-Up and Operation Manual**



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Manual P/N: 5999-1094-00

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Section 1.0

UNPACKING AND SET UP INSTRUCTIONS

1. Remove banding and protective cardboard from the scale.
2. Using chains with hooks, hook the four corners of the deck assembly and lift from base assembly. Set the deck assembly aside for later installation.
3. Remove the (2) wood spacer strips from the base assembly located behind the fulcrum stands.
4. Using chains with hooks, hook the four corners of the base assembly and lift from the skid. Place the scale in the designated location. NOTE: The scale should be placed in an area with an adequate foundation and as level as possible.
5. Shim under the corner gussets of the base assembly so the corners are setting firmly on the floor and any rocking motion in the base assembly is removed. See fig. 1
6. Locate the (4) check stop bolts in each of the four corners. Adjust the stops so there is 1/16" clearance between the load bridge tube and the base frame tube. Tighten the lock nuts. See fig. 2
7. Locate the (2) shock stops. Loosen shock stop bolts until the bolt is flush with the bottom of the shock stop bracket. Tighten the lock nuts. See fig. 3
8. Cut the bands holding the load cell cable to the load bridge. Run the load cell cable away from the scale to the weight indicator.

Replace the deck assembly. NOTE: Check to see that match marks on the base assembly and deck assembly are aligned before replacing deck assembly.

Section 2.0

Calibration

1. The scale base has been factory sealed to a minimum accuracy of 1 part in 5,000.
2. The load cell has a 3 MV/V output.
3. Wiring for the load cell is as follows:

GREEN.....(+) SIGNAL

WHITE.....(-) SIGNAL

RED.....(+) EXCITATION

BLACK.....(-) EXCITATION

SHIELD.....SHIELD

4. Refer to the indicator service manual for wiring the scale base to the indicator. Refer to above wiring diagram.
5. Refer to the indicator service manual for calibration instructions.
6. If your scale base and indicator were purchased as a Cambridge Scale Works System, your base and indicator have been match calibrated at the factory. Your scale base only needs checked with test weights to verify calibration.

Section 3.0

Load Cell Replacement

1. Remove the deck assembly.
2. Remove signal cable from cable holders.
3. Locate the shock stops. (See fig.3) Loosen the lock nuts. Tighten the bolts down against the load bridge tube.
4. Loosen the ½-20 jam nut on top of the load cell and remove. (See fig. 3)
5. Unwind load cell rope from the load cell.
6. Loosen load cell bolts and remove bolts and remove load cell.
7. Place new load cell into position under load cell mounting plate. NOTE: Make sure arrow on end of load cell is turned for correct direction of pull.

Section 3.0

Load Cell Replacement Continued

8. Replace load cell bolts and tighten to approximately 60 FT/LB of torque. NOTE: Be sure the load cell is at a 90 degree angle with the load cell mounting plate so the hole in the load cell is in alignment with the hole in the nose iron plate.
9. Screw the load cell rope up into and through the load cell until the lock nut on the other end of the rope is tight against the bottom of the nose iron plate.
10. Replace the load cell rope lock nut on top of the load cell & tighten. NOTE: Check to make sure the load cell rope is hanging straight at this point.
11. Replace cable into cable holders.
12. Loosen the (2) shock stop bolts until the bolts are flush with the bottom of the shock stop angles. Tighten the lock nuts.
13. Replace the deck assembly. NOTE: Check to see that the match marks on the base assembly and deck assembly are in alignment before replacing the deck assembly.
14. Recalibrate the indicator and scale base.

Section 4.0

Offset Correction

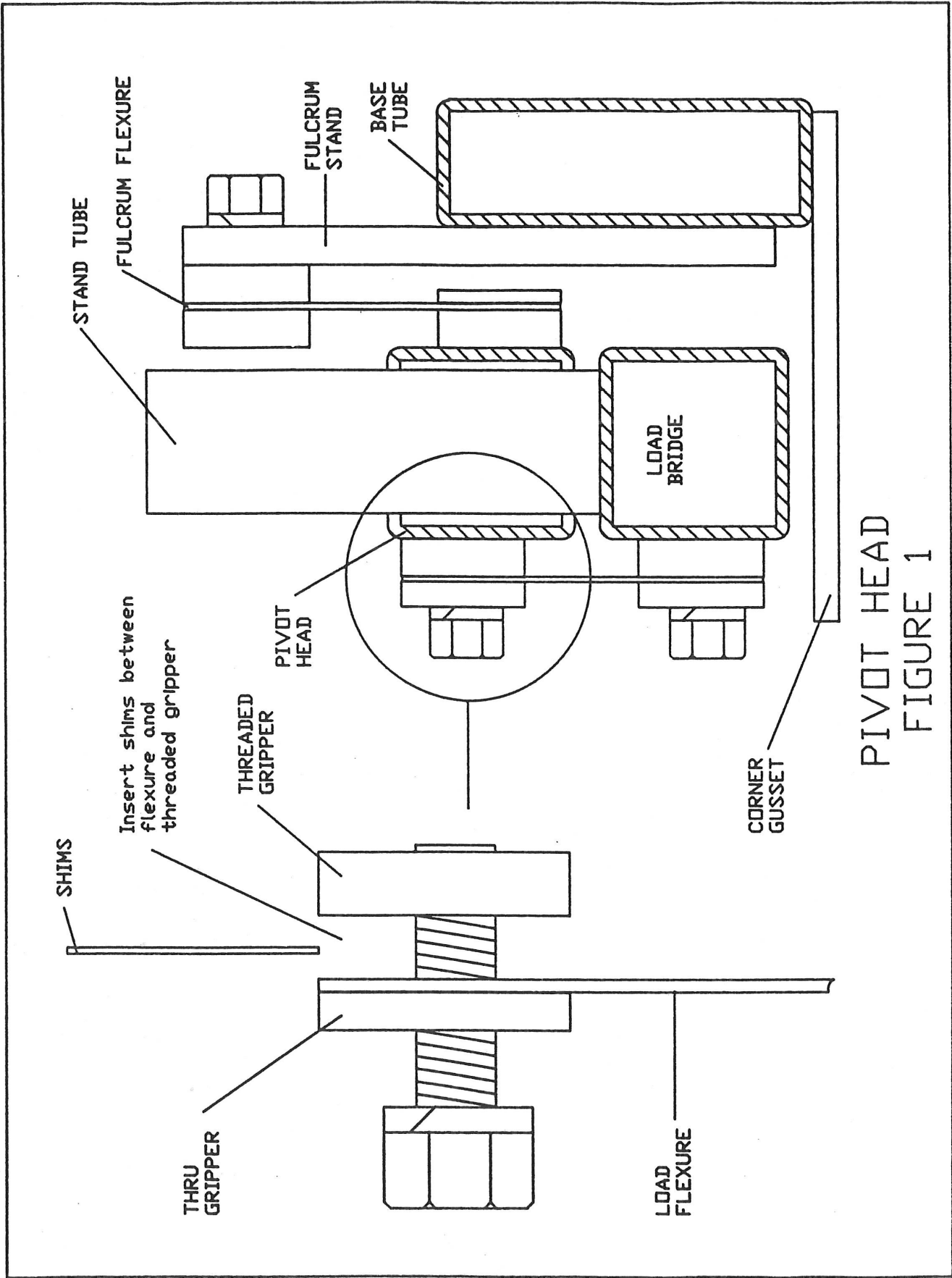
1. At times corner offset corrections may become necessary to maintain the accuracy of the scale base after a major repair or other changes are made to the unit.
2. To make a correction to a certain corner, shims must be added or taken away from the corner needing adjustment. (See fig.1)
 - A.) Adding shims – increases corner readings
 - B.) Removing shims – decreases corner readings
3. The shims must be added or removed from behind the load flexure at the pivot head. (See fig.1) If a large change is necessary, shims should be added or removed at the top and bottom behind the load flexure at the pivot head and the load bridge tube. This will keep the load flexure in alignment without a chance of twisting the flexure.

TROUBLE SHOOTING CHART

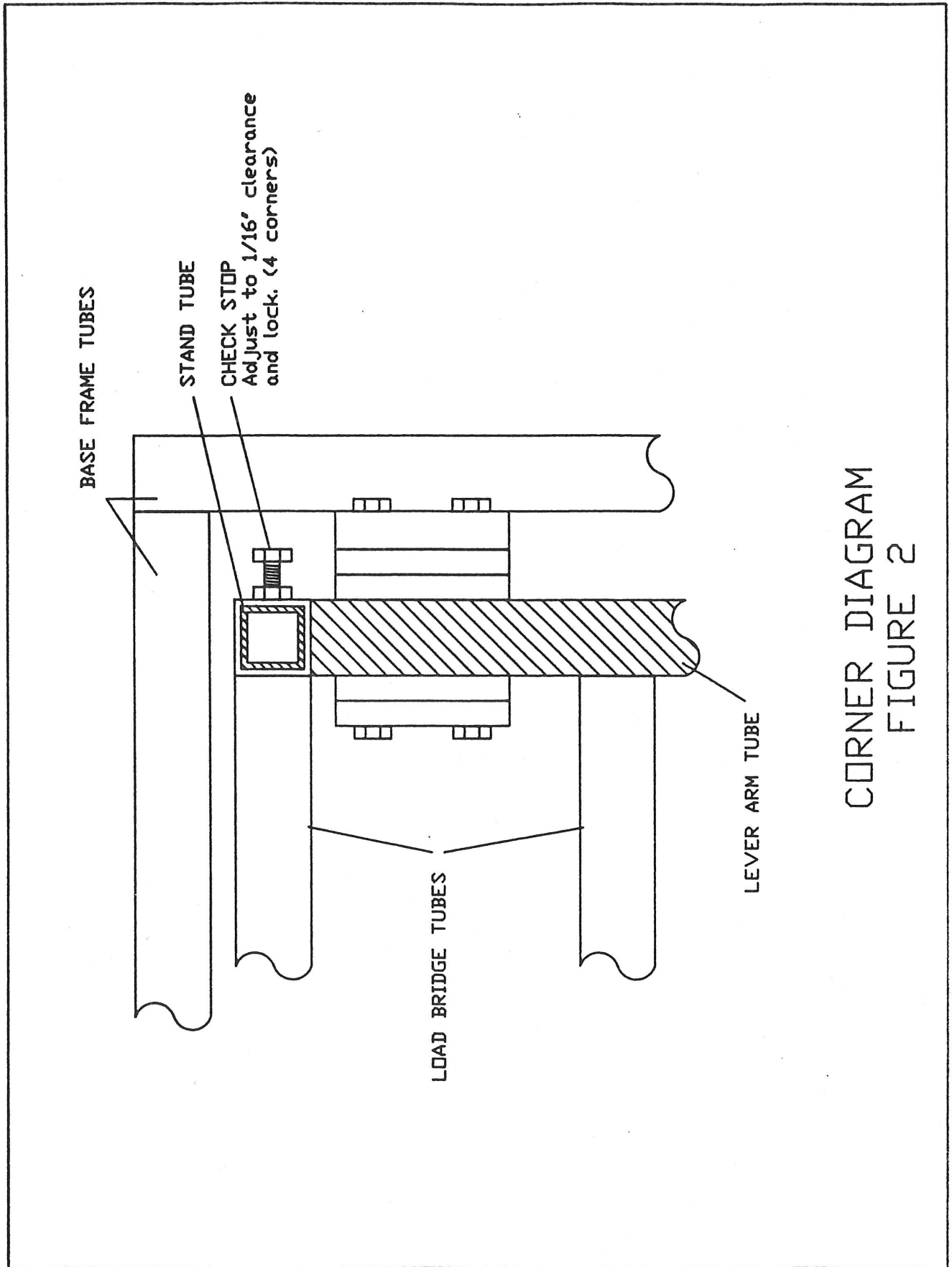
POSSIBLE CAUSES

	IMPROPERLY SETUP	LOOSE HARDWARE	IMPROPER CORNER LEVELING	CROOKED, BENT, OR DAMAGED FLEXURES	INTERFERENCE WITH MOVEMENT AREAS	DAMAGED LOAD CELL OR SIGNAL CABLE	DEFECTIVE INDICATOR	IMPROPERLY SHIMMED LOAD FLEXURES	MISALIGNED CENTER FLEXURE	LEVERS NOT LEVEL	DAMAGED LOAD CELL CABLE
ZERO SHIFT	X	X	X	X	X	X	X				X
UNSTABLE READINGS	X	X		X	X	X	X				
NON - REPEATABILITY	X	X	X	X	X	X	X	X			X
CHANGING CORNER READINGS	X	X	X	X	X						
NON - LINEARITY	X			X	X	X	X			X	X
CORNER OFFSET OUT OF TOLERANCE	X							X			
END READINGS OUT OF TOLERANCE	X							X	X		

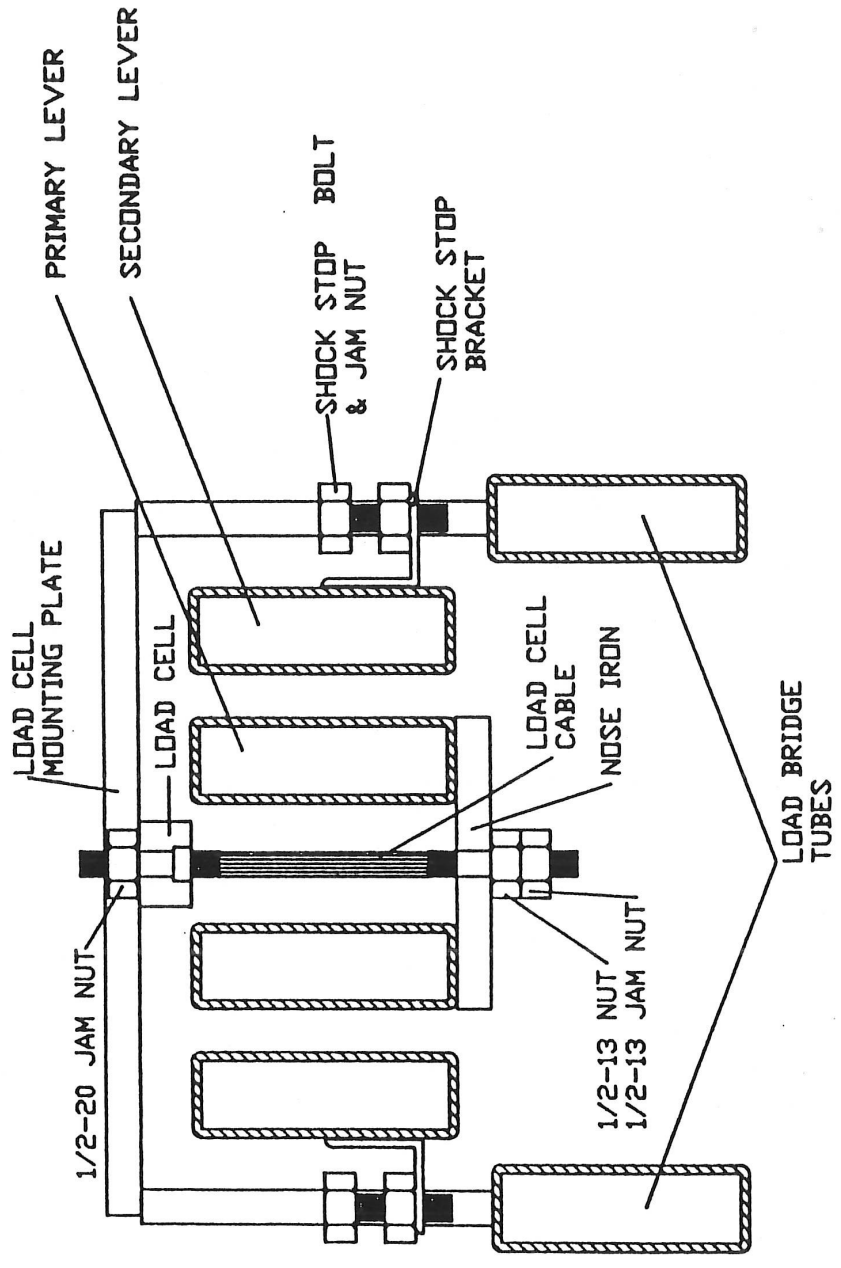
P R O B L E M



PIVOT HEAD
 FIGURE 1



CORNER DIAGRAM
FIGURE 2



LOAD CELL CROSS SECTION
FIGURE 3

Section 5.0 Warranty

CAMBRIDGE warrants the **CSFB Flexure Base Scale** to be free of defects in workmanship and/or materials for 12 months from the date of shipment. This warranty of workmanship and/or materials is valid, if in the opinion of **CAMBRIDGE** the equipment has not been mechanically, environmentally, or electrically abused.

This warranty is limited, at the option of **CAMBRIDGE**, to repair, replace or an appropriate credit adjustment, not to exceed the original equipment sale price paid to **CAMBRIDGE**.

CAMBRIDGE assumes no liability in connection with the sales of its products beyond that stated above.

Warranty replacement parts and or repair services are performed at the factory in Cumberland, Maryland or by an authorized service group approved by **CAMBRIDGE**.

Warranty does not include travel expense if a factory technician is requested to perform repairs at a location other than the factory.

It is the user's responsibility to follow the proper set-up, calibration and operating procedures of the **CSFB Flexure Base Scale** as described in this manual. If the operator has difficulty using their **CSFB Flexure Base Scale** properly, please contact **CAMBRIDGE** at 1-301-724-4082. Any one of our Technicians will be happy to work with the user via telephone.

Section 6.0 Assistance

If at any time and you require assistance with your **CSFB Flexure Base Scale**:

End User please contact your servicing scale dealer.

Authorized Cambridge Dealer/ Distributor please contact:

CAMBRIDGE SCALE WORKS, INC.

115 West Mary Street
Cumberland, MD 21502

Phone: (301) 724-4082

Fax: (301) 724-4964