



L.B. Foster Company

Direct Fixation Rail Fastener Model F20L0

The F20L0 Direct Fixation Fastener has been designed, tested, and supplied to Blatimore MTA, Washington Metropolitan Area Transit Authority, Calgary Transit, Pennsylvania Transit Authority, and others.

The Model F20L0 is a direct mirror image of the Model F20R0 that has also been supplied to many US Transit Authorities. The Model F20L0 provides the following fundamental functions:

- > Secures 115RE rail to concrete track bed.
- > Stabilizes vertical and lateral rail movement.
- > Controls longitudinal rail movement.
- > Provides track noise and vibration dampening.
- > Electrically isolates rail from track bed.
- > Lateral adjustment of +/- 1/8 inch to +/- 1/2 inch.
- > Utilizes non-threaded left-handed rail hold down spring style clips.

Based on extensive laboratory testing and over a decade of system service from both the F20R0 and the F20L0, the Model F20L0 provides the following load environment and electrical characteristics:

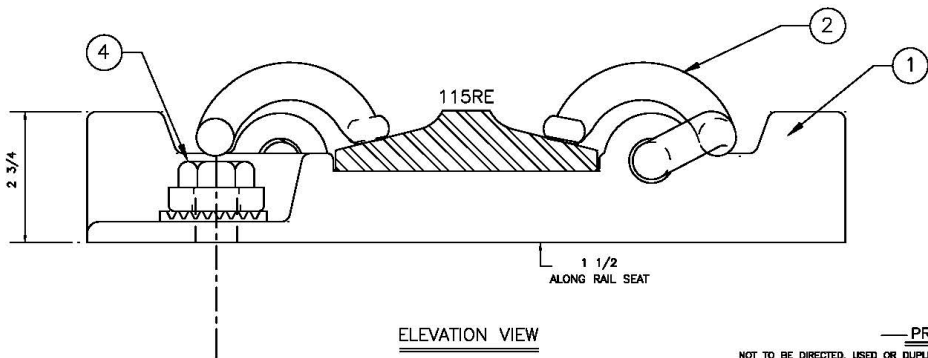
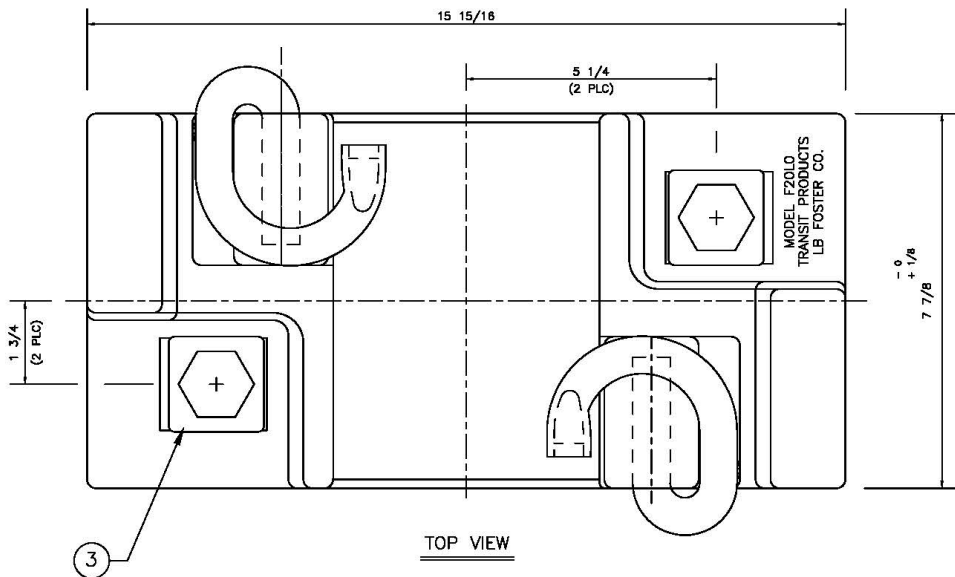
- > A Vertical stiffness of approximately 150,000 pounds per inch deflection.
- > Dynamic stiffness of approximately 1.5 times static stiffness.
- > Applied vertical uplift forces of 2,400 pounds per fastener with upward deflection at approximately 1.5 times that of compression deflection.
- > With vertical forces of 10,400 pounds and lateral forces of 5,900 pounds, the rail head movement is less than 0.200 inches.
- > Applied repeated loading in excess of 3,000,000 cycles with vertical forces of 14,000 pounds and alternating lateral forces of 4,000 pounds and 2,500 pounds. Variations to this loading level have also been performed.
- > Longitudinal rail slippage occurs at approximately 2,500 pounds.
- > Withstands 10,000 volts dc without damage.
- > Electrical resistance at 100 volts (dc) greater than 20 megohms (dry).
- > Electrical impedance at 50 volts (ac), 10,000 Hertz, greater than 10,000 ohms when wet.

The above performance characteristics are provided for informational purpose only and are based solely on previous testing. Actual performances may vary from those stated above.

Variations to Model F20L0 can be made to accommodate various custom requirements. For more information concerning this Direct Fixation Fastener model or other product needs, please contact us at www.lbfoster.com or call us in our Suwanee, Georgia office at (618) 714-6730.

DATASHEET

Direct Fixation Rail Fastener – Model F20R0



NOTES

1. ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.
2. USE WRITTEN DIMENSIONS. DO NOT USE SCALED OFF DIMENSIONS IN PRODUCTION.

BILL OF MATERIALS

ITEM	PART NO.	DESCRIPTION
1 (1 EA)	00-041-132	FASTENER BODY, MODEL F20L0
2 (2 EA)	10-334-001	RESILIENT SPRING CLIP, ø-2056 (LEFT HAND) PANDROL PROPRIETARY STEEL 5180 MODIFIED
3 (2 EA)	31-261-015	ADJUSTABLE COVER PLATE (1/8 INCH INCREMENTS) CAST DUCTILE IRON, GRADE 65-45-12
4 (2 EA)	TBD	7/8-9 UNC CLASS 2A BOLT OR 7/8 SCREW SPIKE MATERIAL AND LENGTH AS REQUIRED

GENERAL INFORMATION

THE FASTENER BODY CONSISTS OF DUCTILE IRON, 65-45-12, TOP AND BOTTOM PLATES FULLY "VULCANIZE" MOLDED WITH AN ELASTOMER COMPOUND INTO A SINGLE FASTENER UNIT. THE MOLDED ELASTOMER COVERS THE ENTIRE PLATE SURFACES WITH THE EXCEPTION OF THE RAIL SUPPORT AREA, THE BOTTOM BODY SUPPORT AREA AND THE MATING SERRATED ANCHOR WHICH PROVIDES 1/8 INCH INCREMENTAL ADJUSTMENT TO A FULL $\pm 1/2$ INCH BODY MOVEMENT.

AS A RESULT OF THE PLATE AND ELASTOMER MANUFACTURING PROCESS, THE FASTENER BODY PROVIDES EXCELLENT NOISE AND VIBRATION CONTROL, ELECTRICAL ISOLATION AND CORROSION RESISTANCE.

ISO 9001 TRANSIT PRODUCTS DIVISION L.B. FOSTER COMPANY NORCROSS, GA 30071 FS 30088		TP FOSTER	
TITLE FASTENER MODEL F20L0, ASSEMBLY			
FOR INFORMATION ONLY			
DESIGN	TRANSIT PRODUCTS	REVISIONS	
DWG BY	RLA 12.10.98	DATE	
APPROV		DESCRIPTION	
SCALE	NONE		
DWG NO.	DF-007		
CONTRACT			
REF	03-041-134		

PROPRIETARY

NOT TO BE DIRECTED, USED OR DUPLICATED FOR PROCUREMENT, MANUFACTURE OR ANY OTHER PURPOSE EXCEPT AS AUTHORIZED, IN WRITING, BY TRANSIT PRODUCTS DIVISION.



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