



L.B. Foster Company
DIRECT FIXATION RAIL FASTENER
Model F30R0

The F30R0 is a direct descendant from the Model F20R0 with only a change to the relief pattern of elastomer to provide a vertically stiffer performing product. The goal was to achieve a vertical stiffness of approximately 300,000 pounds per inch deflection per fastener body which is equivalent to certain earlier model DF fasteners. All other performance factors of the original F20R0 remain. The F20R0 Direct Fixation Fastener was originally designed, tested, and supplied to the Los Angeles Metropolitan Transit Authority (LAMTA) in the early 1990's. The Model F20R0 has subsequently been delivered to numerous "heavy haul" and "light rail" transit agencies across the United States. The supply of F20R0 includes but is not limited to MARTA, Baltimore MTA, Miami Dade County, San Diego's MTDB, San Francisco's MUNI, New Jersey Hudson Bergen LRT. Based on original design requirements, the Model F30R0 fastener bodies provide the following basic functions:

- > Secures 115RE rail (5 1/2 inch rail base) directly to a supporting concrete surface
- > Stabilizes vertical and lateral rail movement
- > Controls longitudinal rail movement
- > Provides track noise and vibration dampening
- > Electrically isolates rail from track bed
- > Utilizes non-threaded rail hold down spring clip type clips

Testing of both the F20R0 and the F30R0 have demonstrated the fastener's response to various load environments and electrical applications. Based on the results of these tests, the F30R0 Direct Fixation Rail Fastener provides the following fundamental performance characteristics:

- > A vertical stiffness of approximately 300,000 pounds per inch deflection per fastener body is achieved as determined by "static" loading between a range of 5,000 to 12,000 pounds per fastener body loading
- > With a "static" vertical force of 16,200 pounds per fastener body (offset 3/4 inch towards gage) and a "static" lateral force of 9,000 pounds per fastener body, the rail head movement along the gage line is controlled to less than 0.360 inches
- > Allows longitudinal movement of the rail at approximately 3,000 to 3,400 pounds longitudinal force per fastener body
- > Withstands a minimum of 15,000 volts (DC) per fastener body in a clean and dry test environment without material breakdown or electrical flashover
- > Provides individual fastener body electrical resistance properties of greater than 1 million ohms (wet) and 10 million ohms (dry) at 500 volts (DC)
- > Exhibits a "dynamic" vertical stiffness of approximately 1.5 times that of the "static" stiffness throughout a similar load range

- > Resists repeated combined vertical and lateral "dynamic" loading in excess of 3,000,000 cycles with a single cycle consisting of:
 - Vertical force of 14,000 pounds per fastener body and a simultaneous lateral force of 4,000 pounds per fastener body (towards "field")
 - Release of all load to near zero
 - Vertical force of 14,000 pounds per fastener body and a simultaneous lateral force of 2,500 pounds per fastener body (towards "gage")
 - Final release of all load to near zero
- > Resists repeated vertical uplift forces of 2,000 pounds per fastener body for greater than 1,500,000 cycles
- > Resists repeated longitudinal loading of +/- 2,000 pounds per fastener body for greater than 1,000,000 cycles

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 F30R0 can be made to accommodate various custom requirements. For more information concerning this Direct Fixation Fastener model or other product needs, please contact us through www.lbfoster.com, transitproducts1@lbfoster.com, or call us at our Suwanee, Georgia office at (678) 926-5200.

NOTES

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

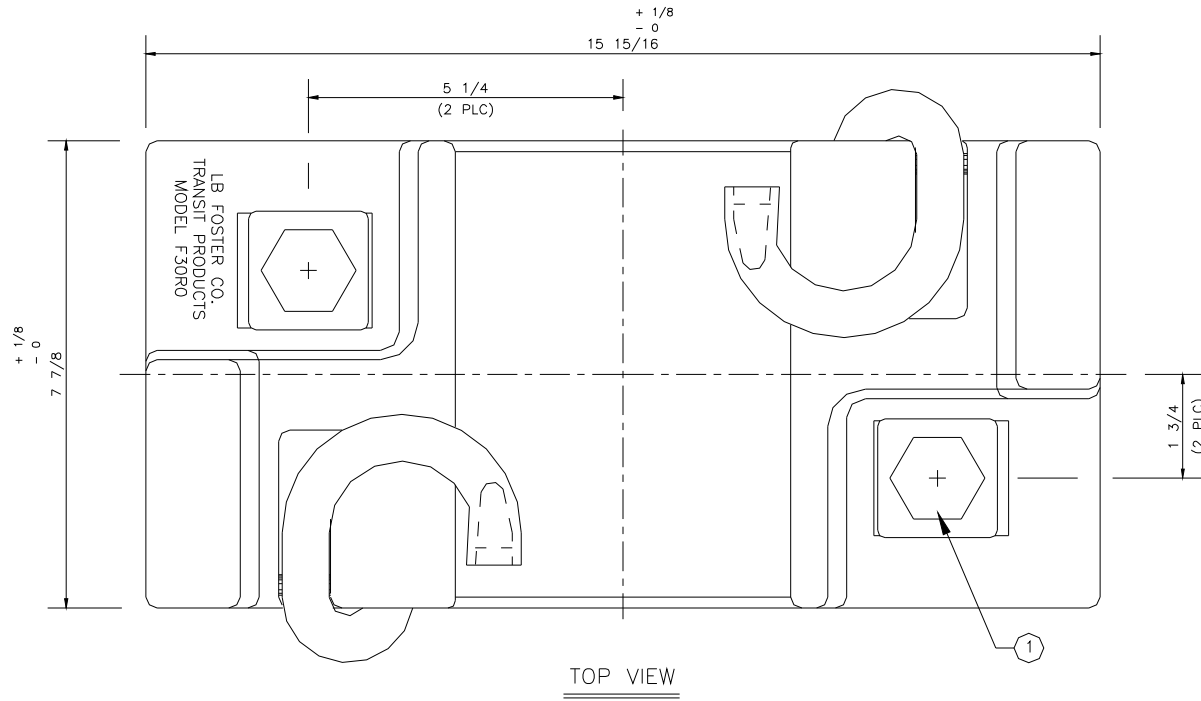
BILL OF MATERIALS

ITEM	PART NO.	DESCRIPTION
1 (2 EA)	TBD	7/8-9 UNC CLASS 2A BOLT OR 7/8 SCREW SPIKE MATERIAL AND LENGTH AS REQUIRED
2 (2 EA)	31-261-015	ADJUSTABLE COVER PLATE (1/8 INCH INCREMENTS) CAST DUCTILE IRON, GRADE 65-45-12
3 (2 EA)	10-334-002	RESILIENT SPRING CLIP, #2055 (RIGHT HAND) PANDROL PROPRIETARY STEEL 5160 MODIFIED
4 (1 EA)	00-041-155	FASTENER BODY MODEL F30R0

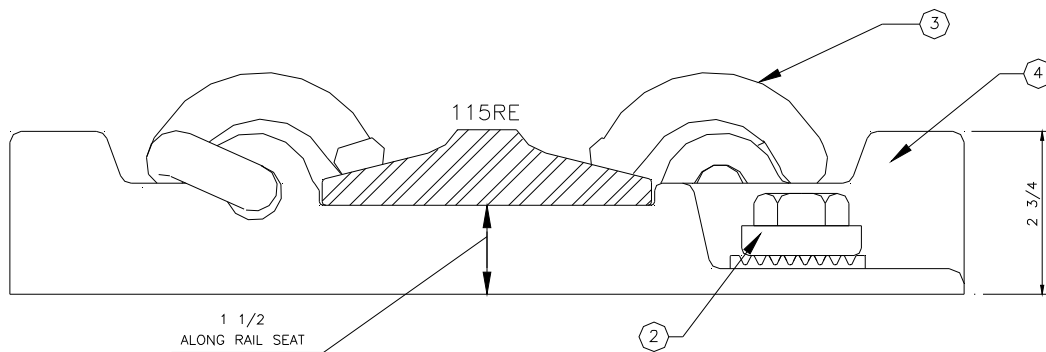
GENERAL INFORMATION

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 AREA WHICH PROVIDES 1/8 INCREMENTAL ADJUSTMENT TO A FULL ± 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.



TOP VIEW



ELEVATION VIEW

PROPRIETARY

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

	TRANSIT PRODUCTS DIVISION L.B. FOSTER COMPANY SUWANEE, GA 30024		
	TITLE FASTENER MODEL F30R0, ASSEMBLY FOR INFORMATIONAL PURPOSE ONLY		
DESIGN TRANSIT PRODUCTS	REVISIONS		
DWG BY LT 8.25.97	DATE	DESCRIPTION	BY
APPR'D			
SCALE NONE			
DWG NO. DF-017			
CONTRACT			
REF 03-041-156, R0			

F20R0 / F30R0

