

FALSE CAR

Maintenance and Repair Manual



Part No. 11-301

FALSE CAR

Part # 11-301

Product Description

The Wurtec False Car has been proven over time to be a durable and reliable product. To ensure that the False Car provides you with the level of safety and security that is necessary, you must perform the following repair and inspection after every use, and at a minimum of every 30 days.

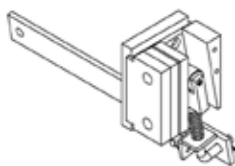
Note that to have a proper inspection, where possible each part must be removed from the assembly and thoroughly inspected. Also be aware that there may be multiple instances of each item on a False Car, which must all be inspected as specified in the following.

Assembly & Installation Instructions

I. Visual Inspection

a. False Car Safeties

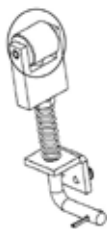
The first parts of any False Car that should be inspected are the safeties. Correct operation of the safeties is critical as these are the devices that will hold the False Car securely to the elevator rails while working in the hoistway. The Safety Assembly consists of numerous components. Below is a picture of the entire Safety Assembly for reference.



I. Knurled Rollers [11-300-19]

At the bottom of each Side Stile (item 1 page 21) is the Safety Assembly and within the Safety Assembly is a Knurled Roller. Below is a diagram indicating where the Knurled Roller is attached. The Knurled Roller must be checked for wear, looking for a constant diameter with sharp points on the top of all the knurl points. There should be little to no dirt, metal, or other foreign material between the knurls or grooves. The roller should not have any dirt in the bore where the Spring Pin is located. (Every knurled roller is replaced after every use when returned to wurtec.)

FALSE CAR



The Knurled Rollers above show the difference between a brand new product and one that has been used once. The key note about this is that the knurls have been almost completely worn off of the specimen on the right.

Wurtec uses a Class 1 knurl on the false car roller. During the manufacturing process the diameter is not controlled closely since the configuration and sharpness of the knurl points is more important than the diameter of the roller. Since the diameter is not tightly controlled it is difficult to use it as the sole means of retirement criteria.

Suggested Retirement Criteria:

1. If the points of the knurl are no longer sharp, as shown in the photographs, regardless of diameter replace the roller.
2. If the diameter of the knurled roller is smaller than 1.015 inches (25.781 mm) replace the roller.

ii. Fork [11-300-18]

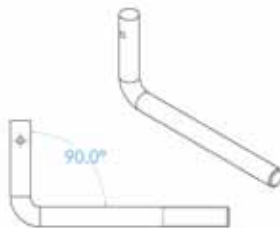
The Knurled Roller is contained in the Safety Assembly by the Fork. Below is a diagram indicating where the Fork is located. Inspect the Fork to ensure that the Knurled Roller Spring Pin fits securely between the Fork sides. Validate that the L-Rod can be screwed into the Fork and that the threads are not damaged. (If damaged to the point that the Fork cannot be removed from or screwed onto the L-Rod, both parts should be replaced). Make sure that the Knurled Roller is able to rotate freely inside the Fork. If the sides of the Forks are bent preventing the Knurled Roller from rotating freely, replace the Fork immediately.



Maintenance and Repair Manual

iii. L-Rods [11-300-20]

Inspect the L-Rod that threads into the Fork. If the Fork and L-Rod are stuck together, both should be replaced. Check for any cracks and/or deformations in any part of the L-Rod mainly near holes, at the 90° bend, and at the threaded section. The L-rod is bent to an angle of 90°. If the L-Rod is bent to an angle that deviates more than $\pm 5^\circ$ from 90° a replacement is required.



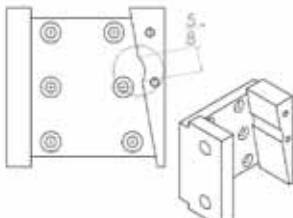
The above L-Rod has been clearly bent beyond a safe usable angle. This example is extremely dangerous and should never be used. Immediately replace any L-rod that is bent more than the allowable limit.

iv. Safety Blocks [11-301-23]

The Safety Block is located in the Side Stile and is retained in place with a Backer Plate. Below is a picture of what the individual Safety Block part looks like. First inspect the part for scratches or gouges in the block. Gouges should be no deeper than 1/16" (1.6mm) deep. If gouges are wider than 1/16" or deeper than 1/16", replace the safety block. If gouges are on or around angles/corners the part should be replaced immediately. Check chord dimension of wear on the block. The area of the block where the Knurled Roller makes contact with the Safety Block should show deformation/impression having a chord dimension no larger than 5/8 inch (15.8mm) wide as indicated in the circled section of the below picture. The Safety Block should be allowed to slide freely left and right inside the Side Stile. Make sure the Safety Block has the correct amount of spacer shims properly positioned and attached. These shims allow you to correctly use the safety on rails of various sizes. Any time the Safety Block and Backer Plate are separated, they must be reassembled with Loctite 242 or equivalent.

[If a Safety Block or Backing Plate need to be replaced, and the

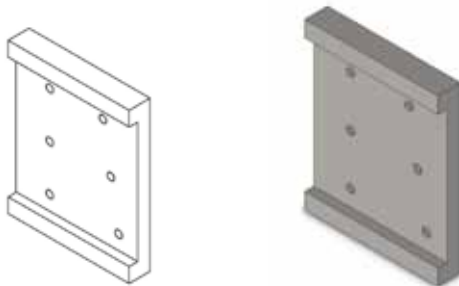
1/4-20x1"Lg. FHSCS is stuck in the Safety Block/Backing Plate, the following advice may be beneficial for removal. A 5/16 inch (8 mm) drill bit should be used to drill out the heads of 1/4-20x1"Lg. FHSCS bolts so that the Safety Block may drop out. THIS METHOD SHOULD BE USED IF AN ALLEN WRENCH FAILS TO LOOSEN BOLTS]



V. Backer Plate [11-300-22]

Attached to the Safety Blocks are the Backer Plates. The Backer Plate allows the Safety Block Assembly to shift within the Side Stile while still keeping it securely attached to the False Car. Below is a picture of what the Backer Plate looks like. First the Backer Plates must be checked for any scratches or gouges. If any gouges are wider than 1/8" (3.2mm) or deeper than 1/16" (1.6mm) the part should be replaced. If any scratches or gouges appear near corners/edges the part should be replaced immediately. Any unauthorized modifications on the Backing Plate may cause problems with the structural integrity of the Safety Assembly and the part must be replaced immediately. If the flat head bolts are removed, make sure to check that the threads on the Backer Plate are usable. If the Backer Plate and Safety Block are stuck together, both will need to be replaced if they are unable to be separated. Any time the Safety Block and Backer Plates are separated, they must be reassembled with Loctite 242 or equivalent.

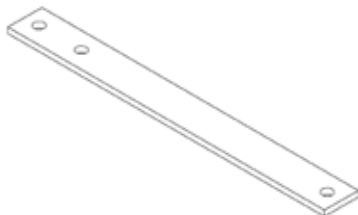
[If Safety Block or Backing Plate need to be replaced and the 1/4-20x1"Lg. FHSCS is stuck in Safety Block/Backing Plate the following advice may be beneficial for removal. A 5/16 inch (8 mm) drill bit should be used to drill out the heads of 1/4-20x1Lg. FHSCS bolts so that they Safety Block may drop out. THIS METHOD SHOULD BE USED IF AN ALLEN WRENCH FAILS TO LOOSEN BOLTS]



Maintenance and Repair Manual

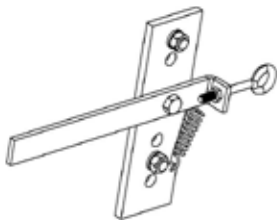
Vi. Retraction Arms [11-300-11]

Look for any bends and/or cracks in the Safety Retraction Arms. If any scratch or gouge is deeper than 1/16 inch (1.6mm) it is recommended that the Retraction Arm be replaced. Ensure that all of the arms move freely and do not bind or interfere with the Side Stile or Tension Bracket. This is accomplished by adjusting the threaded fastener to allow the arm to pivot freely, then locking it into position with the jam nut provided. Check that all hardware is in place and in acceptable useable condition. Finally, verify that after retraction is completed, the L-Rods reengage to their original state.



Vii. Safety Pawl

Check for bent or damaged parts as well as scratches and gouges. Scratches and gouges should be less than 1/16 inch deep (1.6mm). Ensure that the eye bolt is not damaged or worn and that it is tight. Orient the eye bolt so that the eye is in the vertical plane. If the Safety Pawl is damaged and not tight with the eye bolt, tighten or replace the Safety Pawl immediately. Check the spring to make sure that it has not been permanently deformed and that it is in a useable condition. The coil length of the spring before extension (free length) is 1 1/4 inches (31.8mm). This should be a benchmark for how long the coiled spring should be at the coil. Verify that the arm is able to move freely and does not bind with any surrounding parts.

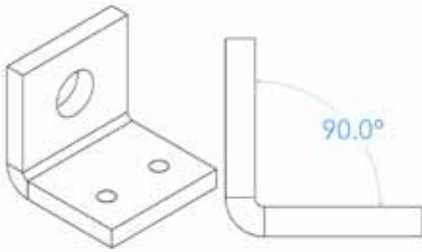


Above is an example of a bent Eye Bolt that must be replaced.

Viii. Tension Bracket [11-300-10]

Inspect the Tension Bracket looking for damage, wear, unauthorized modification and bends. Ensure that the Tension Bracket is securely fastened to the Side Stile. The Tension Bracket is manufactured to an angle of 90°. Safe working conditions allow $\pm 5^\circ$ change. If the angle has a bend larger/smaller than allowed, it should be REPLACED IMMEDIATELY.

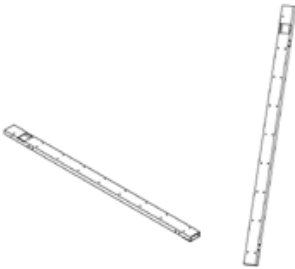
FALSE CAR



The above picture shows both a good and bad Tension Bracket. The specimen on the right is a 90° angle, while the specimen on the left has been bent to an unusable angle, which requires immediate replacement.

b. Side Stile

The Side Stile is the main support for the entire False Car and therefore should be closely checked for any bends, cracks and/or warps. Ensure that the Side Stile is not worn where the faces of the rails ride. Grooves are acceptable within 6" of the bottom or top edge of the side stile. Any groove that surpasses 6" from the bottom or top edge will need to be replaced. See pictures on the following page to clarify a groove vs. a scratch. Verify that the flat plate is securely welded to the top of the Side Stile.



Above is a Side Stile that has had the end top plate cut from misuse, and is unusable.



Above is a Side Stile that has had the end top plate sheared off due to misuse, and is unusable.

FALSE CAR



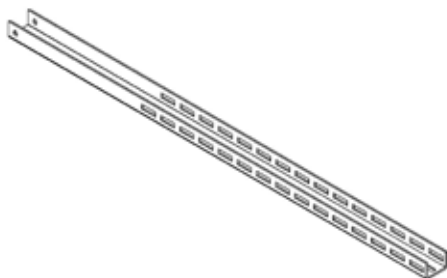
The above side stiles show grooves surpassing 6".



The above images show scratch damage to the side stile. This is an acceptable amount of wear.

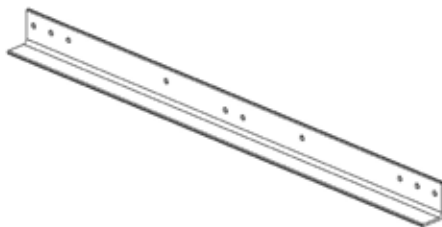
c. Cross Channels

Check the Cross Channels for any bends, warps or otherwise damaged parts. Ensure that no unauthorized modifications such as new holes, slots, self drillers, etc. are found on the Cross Channels. Ensure that the Cross Channels were correctly oriented when installed. If they were installed incorrectly, move them into the correct state they should be in. The cross channels on one side stile of a false car point up while the cross channels on the mating side stile of the false car point down.



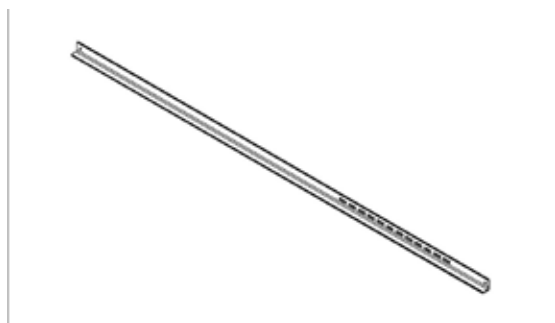
d. Platform Support Angles

Check the Platform Support Angles for any bends, warps or otherwise damaged parts. Ensure that no unauthorized modifications such as new holes, slots, etc. exist in the Platform Support Angles. Make sure the holes have not become elongated. If they are elongated, the angle should be replaced.



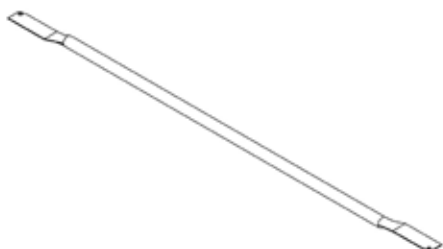
e. Lift Angles

Check Lift Angles for any bends, warps, or otherwise damaged parts. Ensure that the holes are intact and not elongated, or broken through. Check for unauthorized modifications such as new holes, slots, etc.



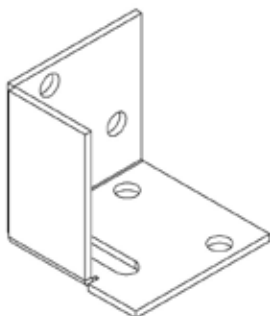
f. Diagonal Braces

Check for any bent, warped, or otherwise damaged parts. Ensure that the correct quantity is present. Check for any unauthorized modifications such as new holes, slots, etc. The ends should be as straight and flat as possible so that a flush mounting surface is created. If the holes have become elongated or the brace is bent, the part must be replaced.



g. Joist Brackets

Check for bent (especially corners), warped, or otherwise damaged parts. Ensure the correct quantity is present. Check for unauthorized modifications such as new holes, slots, etc.



Maintenance and Repair Manual

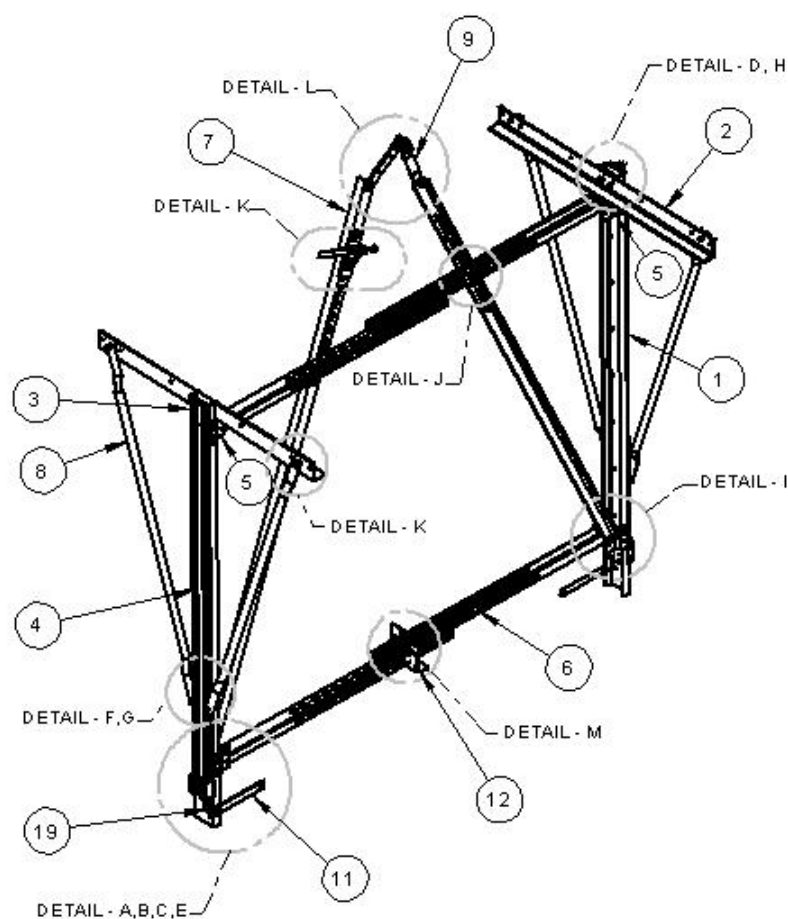
h. Overall Assembly

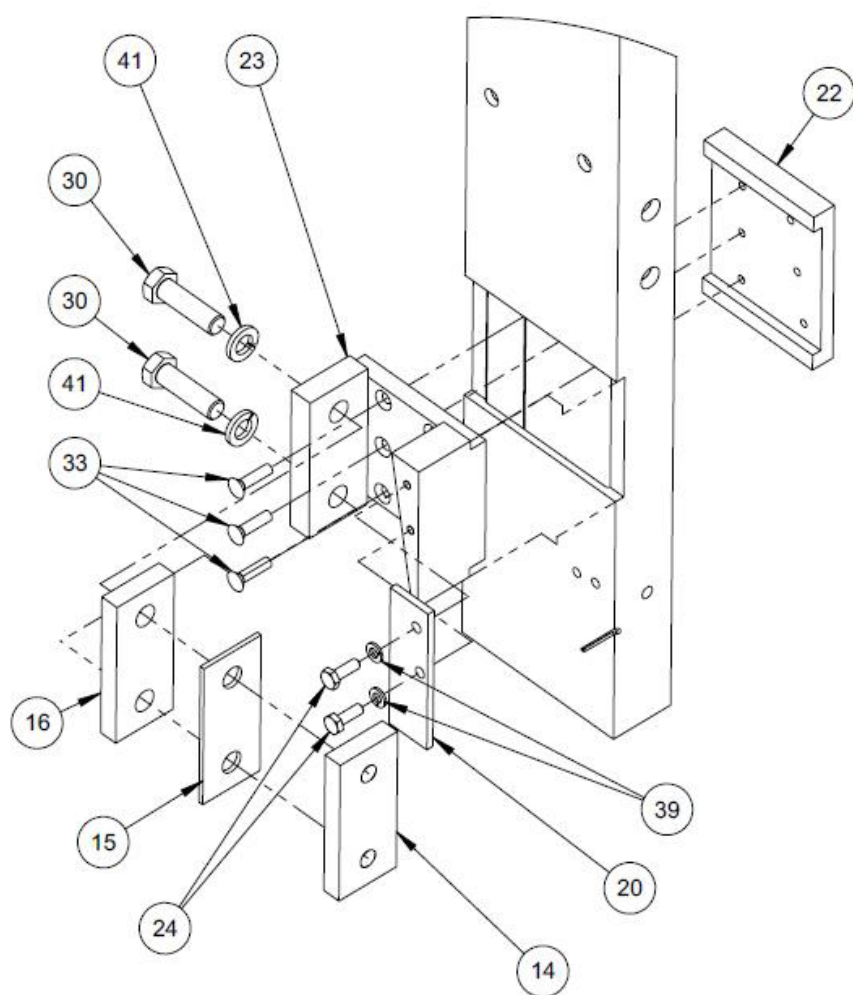
Check to ensure that all hardware is in place, securely fastened and appropriately sized. Verify that when the Safety Rollers are retracted they spring back into their locked (engaged) position. If new parts are required, replacement hardware must be grade 5 or better. Check for labels. There should be one label on each of the Side Stiles for a total of two per assembly. There are LEFT AND RIGHT VERSIONS of the Side Stile Assemblies (The only differences are Cross Channel location and orientation, a Safety Pawl (if provided) and the extra bolt & extra carriage bolts for cross channels). Make sure that the Side Stiles are correctly oriented before clearing for further use. Refer to the Installation & Service Manual for clarification of the difference between the left and right sides. After final inspection and when all parts have been cleaned or replaced and the assembly is ready to be returned to the field, reassemble the False Car in shipping format. During reassembly, ensure that all the parts are in the correct slots, orientations, etc. so that the False Car will work as specified. ENSURE THAT PARTS ARE ON CORRECT SIDES. Make sure that the Safety Pawl (if provided) is on the left Side Stile Assembly. During shipment the right Cross Channel should have more hardware than the left Cross Channel. When properly assembled, the Cross Channel bolted to the left Side Stile should have the channel opening facing down. When properly assembled the right Side Stile Cross Channels should have their openings facing upwards. The Safety Assemblies should be correctly assembled. The Safety Assembly on the right side should be facing forward, while the Safety Assembly on the left side should be facing towards the rear. Verify that the Safety Blocks are free to shift back and forth within the Side Stiles. After reassembly, ensure that all springs work properly and push all required parts back to required positions. The Retraction Arms should be aligned with the Side Stile so that they are not bent or damaged during shipment. The Diagonal Braces as well as the Tension Brackets will be aligned with the Side Stile while in the shipping format. During transportation, the Cross Channels should be folded together and laid alongside the Side Stiles. The Joist Brackets should be attached to the Cross Channels, but should not interfere with the surrounding parts to prevent scratching or gouging.

i. Safety Retraction Kit

Verify that the Safety Retraction Kit is included with the assembly. Verify that all contents of the kit are present, and check the cable for damage. The cable should be replaced if it shows any visible sign of damage. The length of the cable varies with the DBG of the false car. Make sure the cable is long enough for your purposes.

FALSE CAR





DETAIL - C

FALSE CAR

BOM Table

ITEM NO.	QTY.	Part No.	DESCRIPTION
1	2	11-300-01	SIDE STILE
2	2	11-300-02	PLATFORM ANGLE - 1500#
3	2	11-300-03	ADJUSTABLE GUIDE ANGLE
4	2	11-300-04	FIXED GUIDE ANGLE
5	8	11-300-05	ZEE BRACKET
6	4	11-300-06	ADJUSTABLE CROSS CHANNEL
7	2	11-300-07	LIFT ANGLE
8	4	11-300-08	DIAGONAL BRACE (FALSE CAR)
9	2	11-300-09	LIFT BAR
10	2	11-300-10	TENSION BRACKET
11	2	11-300-11	SAFETY RETRACTION BAR
12	2	11-300-12	JOIST BRACKET
13	2	11-300-13	SAFETY RETRACTION SPRING
14	2	11-300-15	TAPPED PLATE
15	2	11-300-16	1/8" SPACER
16	2	11-300-17	1/2" SPACER
17	2	11-300-18	FORK
18	2	11-300-19	KNURLED ROLLER
19	2	11-300-20	L-ROD
20	2	11-300-21	SAFETY COVER PLATE
21	1	11-300-24	SAFETY PAWL ASSEMBLY
22	2	11-301-22	RETAINING PLATE 1500 #
23	2	11-301-23	SAFETY BLOCK 1500#
24	4	13003	1/4-20 X 3/4" HHCS Z
25	16	13105	3/8-16 X 1" HHCS Z
26	2	13109	3/8-16 X 1 1/2" HHCS GR. 5 Z
27	26	13207	1/2-13 X 1 1/4" HHCS Z
28	5	13221	1/2-13 X 4 1/2" HHCS Z
29	2	14213	1/2-13 X 2 1/2" HHCS GR. 8
30	4	17210	1/2-20 X 1 3/4" HHCS GR. 5 Z
31	16	21817	3/8-16 X 1" CARRIAGE BOLT GR. 5 Z
32	14	21823	1/2-13 X 1 1/4" CARRIAGE BOLT GR. 5 Z
33	12	24225	1/4-20 x 1" FHS HCS
34	4	29049	#10-32 X 1/2" PAN HEAD SCREW Z
35	16	33082	3/8" DIA. FLATWASHER Z
36	16	33086	1/2" DIA. FLATWASHER Z
37	16	33334	1/2" BEVELED WASHER PLAIN
38	4	33614	#10 SPRING LOCKWASHER Z
39	4	33618	1/4" SPRING LOCKWASHER Z
40	16	33622	3/8" SPRING LOCKWASHER Z
41	38	33626	1/2" SPRING LOCKWASHER Z
42	20	36306	3/8-16 HEX NUT Z
43	34	36310	1/2-13 HEX NUT Z
44	16	37024	3/8-16 HEX NUT NYLON INSERT Z
45	11	37030	1/2-13 HEX NUT NYLON INSERT Z
46	2	37559	1/2-13 HEX NUT NYLON INSERT GR 8 Z
47	2	65076	FASTENAL 65076 COTTER PIN Z (OR EQUIV.)
48	2	64251	1/4 DIA. X 1 1/2" LG. SPRING PIN

Maintenance and Repair Manual

Notes...

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