"FIELD OF VISION" by ROSCO

"Field of Vision" is a video guideline for proper school bus mirror adjustment. To implement the information contained in this video please follow these simple steps:

INTRODUCTION

1. Watch the video before doing anything else This will help you, the viewer, become familiar with the overall program. You will get an idea of what the grid looks like and how to paint it on the ground.
2. Review the grids shown on pages two and three. You'll see that there are two grids. On page two, in black, is the cylinder layout exactly as it appears in figure two of FMVSS 111. The spots representing the cylinders are lettered A through P. This lettering system makes it easier to refer to each spot. On page three is the painted grid layout as recommended by Rosco. This grid contains some additional rows of spots as compared with the FMVSS 111 grid. The additional rows of blue spots at 15 and 18 feet were added because, as was mentioned on the video, the actual blind area in front of a conventional bus extends out further than 12 feet. There are also two rows of additional spots in red, at 3 feet and 9 feet. These spots cover the intermediate blind areas for drivers of cutaway (Type A) and transit style (Type D) buses. (See the OPERATIONS section of this instruction manual for explanation of these intermediate blind areas.) The spots which directly match the FMVSS 111 grid are also lettered A through P. The additional spots mentioned above, which do not appear in FMVSS 111, are not lettered. Make note of the various colors indicated for the different spots on the grid. They help drivers differentiate between the spots on the grid. You can use other colors as well.

SETUP

3. Lay out the grid using a conventional bus. Mark off the spots and lines using a standard chalk liner or other similar device. The row of spots at 0 feet needs to be tangent to the purple dotted line intersecting the forwardmost point on the bumper. (See enlarged inset below the grid drawing on page three.) The spots in front of the bus can be split into three separate vertical rows. The middle row runs along the centerline of the bus, with the centerline (green dotted line) intersecting the centers of the spots. The left row of the spots runs along the line (orange dotted line) from the left side of the bus with the line intersecting the centers of the spots. The right row of spots runs along the line (light blue dotted line) from the right side of the bus with the line intersecting the centers of the spots.
4. We recommend stenciling the distances next to each line of the grid in front of the bus, as shown in the video. This isn't necessary, but will give the drivers an idea of the size of their blind area in front of the bus. It will also help them recognize each row of spots.
5. We recommend painting the grid lines in between the spots. These lines help define the space in front of the bus and make the images in the mirrors more easily recognizable. These lines should be painted in the same colors as the spots in those rows.
6. Mark and paint the spots near the front wheels along the centerline of the front axle. The centers of these spots should be one foot from the front wheel as shown on the grid.

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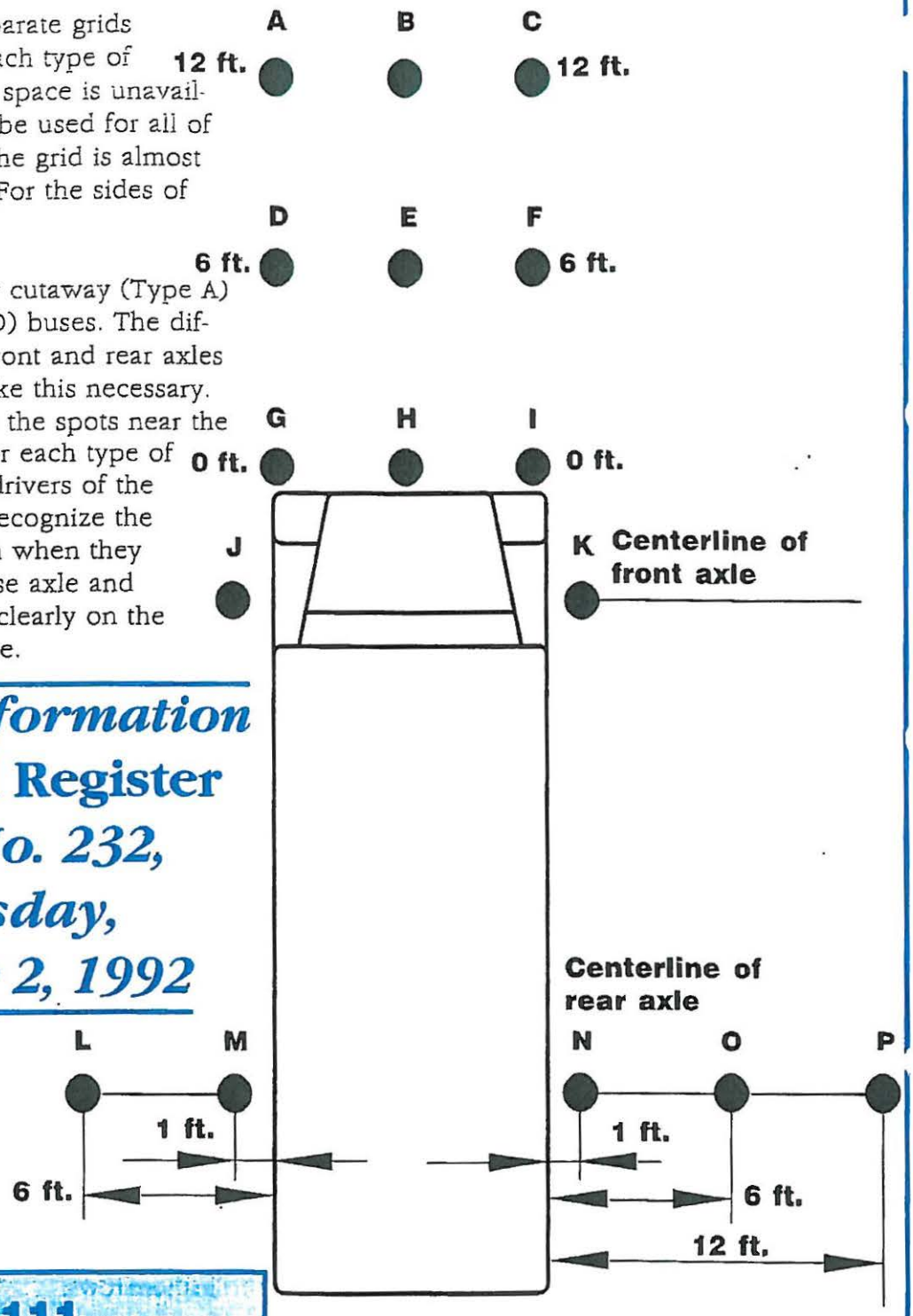
7. Mark and paint the spots along the centerline of the rear axle as shown on the grid layout.

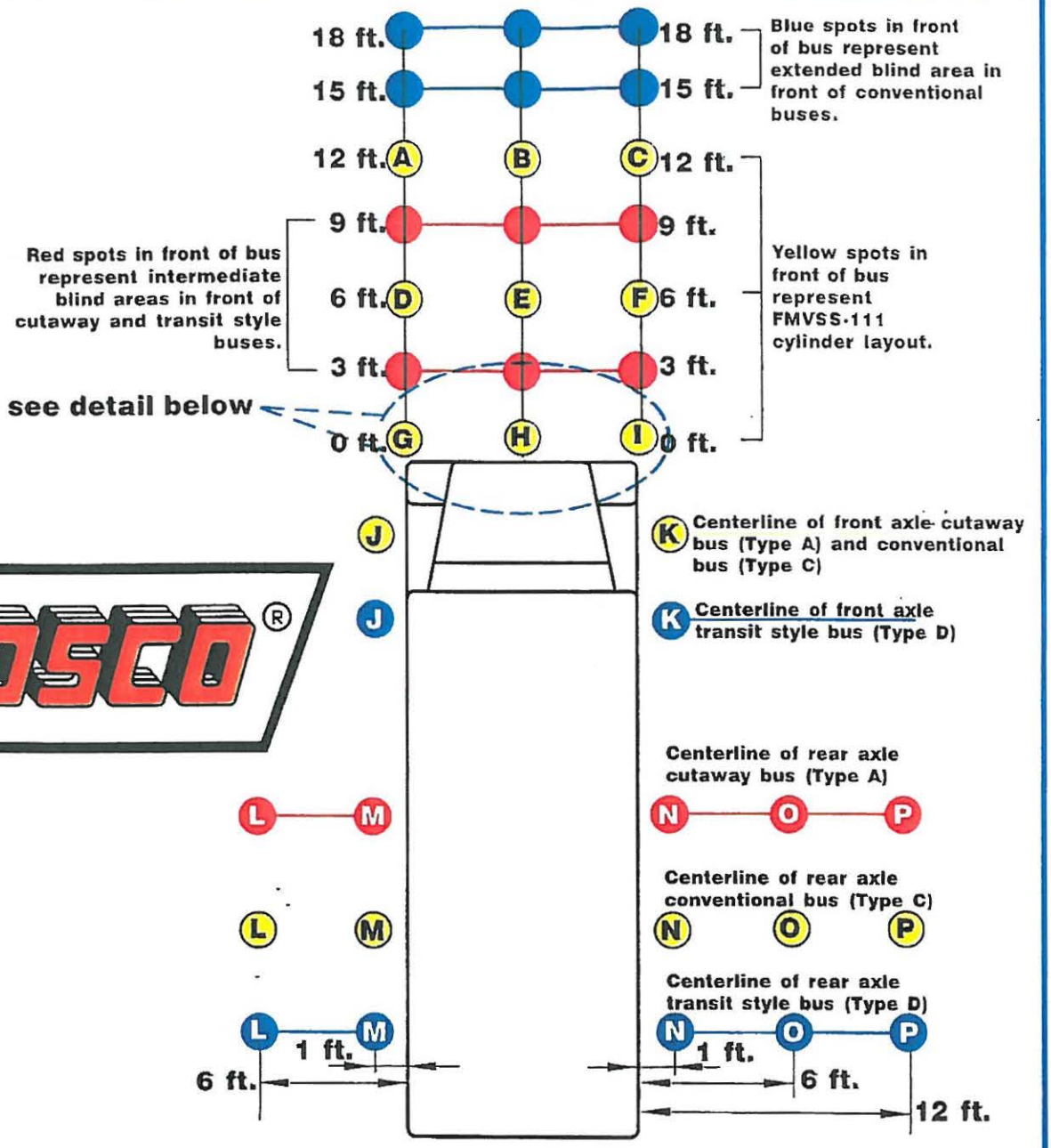
8 If space is available, separate grids should be painted for each type of school bus However, if space is unavailable, the same grid can be used for all of the types The front of the grid is almost identical for each type. For the sides of the grid see step 9.

9. Repeat steps 6 and 7 for cutaway (Type A) and transit style (Type D) buses. The different locations of the front and rear axles on each type of bus make this necessary. Use a different color for the spots near the front and rear wheels for each type of bus. This will help the drivers of the various types of buses recognize the spots that apply to them when they pull up to the grid. These axle and wheel spots are shown clearly on the Rosco grid on page three.



For more information see* Federal Register *vol. 57, No. 232, Wednesday, December 2, 1992

FMVSS-111 Location of Test Cylinders for School Bus Field-of-View Test



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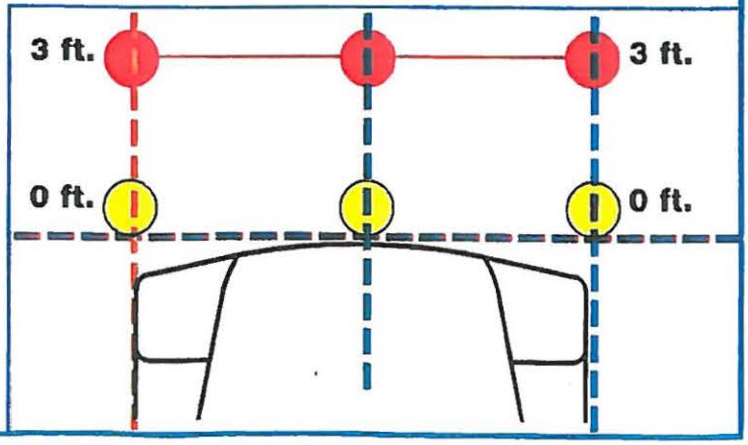
● ● ● — round painted spots are 12.0" diameter

DETAIL VIEW



Layout of Painted Grid for School Bus Field-of-View Mirror Test (Recommended by Rosco)

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OPERATIONS

A. Each time a bus leaves the yard, the driver should pull up to the grid to verify that his mirrors are properly adjusted.

B. The front bumper of the bus should come to rest just "touching" the first row of spots, with the bus centered between the outer lines of the grid.

C. An assistant should be present at the grid to guide the bus up to the row and adjust the mirrors according to the driver's instructions, should it be necessary.

D. This process can be accomplished in under 20 seconds per bus.

E. The driver needs to use both of his mirror systems in order to see the entire field of vision. The mirror system on the sides of the bus, called the rear view system or side view system, is referred to in FMVSS 111 as System A. The driver should use this system to see the tops of cylinders (or spots) L, M, N, and O. The driver should also use this system to see 200 feet behind his bus.

F. The system on the front of the bus, commonly referred to as the cross view or crossover system, is called System B in FMVSS 111. This mirror system should give the driver a view of the tops of cylinders (or spots) A through K, as well as the tops of cylinders (or spots) L, O and P. Both cross view mirrors must be used together to see the complete field of view. Neither mirror by itself will cover the entire field. Certain cylinders (or spots) can be seen in only one of the cross view mirrors. For instance, the mirror on the front left should give the driver a good view of cylinders (or spots) C, D, E, F, G, H, I, J and L. The mirror on the right should give the driver a good view of cylinders (or spots) A, B, D, E, F, G, H, I, K, O and P.

G. Proper classroom and field training is still necessary to teach the drivers how to use the mirrors and how to recognize objects, obstacles, and people, when they appear in the mirrors.

H. Drivers need to be taught where to look to see a given blind area. For instance: to see the blind area in the left front section in front of the bus, the driver may need to look in his right cross view mirror.

I. The most important lesson, which needs to be taught, is the lesson of caution No mirrors can be substitutes for good judgement or training. In addition, cross view mirrors diminish the size of an object considerably. No matter how small an object appears to be in the mirror, do not move the bus until you investigate it further.

J. This video and instruction sheet are intended only as a suggested guideline for proper mirror adjustment. They may be used as <u>part</u> of a proper classroom and field training program, but are not sufficient by themselves There can be no substitute for a proper field and classroom program with trained instructors.

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