



MANAGEMENT OF TRANSPORTATION EQUIPMENT

**NAVDOCKS P-300
JUNE 1964**

**DEPARTMENT OF THE NAVY
BUREAU OF YARDS AND DOCKS
WASHINGTON, D. C. 20390**

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FOREWORD

This publication has been prepared by the Commander, Naval Facilities Engineering Command (formerly Chief, Bureau of Yards and Docks). These policies and procedures are mandatory for all personnel concerned with the management of the Transportation Equipment Program throughout the Navy and should assist all management levels in the efficient management of transportation equipment.

This publication is divided into two parts so that information and procedures in the administration, operation and maintenance of Transportation Equipment can easily be located.

CHAPTER I. *Administration and Operation of Transportation Equipment*— This part encompasses administration, procurement, rental, charter, assignment, loan, utilization, registration and technical record control, disposition of equipment, operation of ambulances, installation of red lights, sirens, seat belts, modification and alteration of equipment, credit cards, and operational procedures for automotive, construction and railroad equipment.

CHAPTER II. *Transportation Maintenance Management*— This part encompasses planning, scheduling, shop control, supply coordination, painting, identification markings and protective coatings, safety and load test, calibration and marking of cranes, oil analysis, and guide lines for selection and application of fuels and lubricants approved for automotive and construction equipment.

The instructions, guides, procedures and criteria for exercising management controls are provided to attain full utilization for men and materials.

It is not the intent of the Commander, Naval Facilities Engineering Command, that the data contained in this publication be static. Proper management must be dynamic. Therefore, as new and better management and industrial transportation techniques are developed, the content of this publication will be revised or modified accordingly.

This publication is certified as an official publication of the Command and, in accordance with Secretary of the Navy Instruction 5600.16, has been reviewed and approved.



A. C. Husband
Rear Admiral, CEC, USN
Commander,
Naval Facilities Engineering Command

PART V. PAINTING, IDENTIFICATION MARKINGS, AND PROTECTIVE COATINGS

Section I. PAINTING

2.5.1.1 REQUIREMENTS FOR PAINTING. Transportation equipment will be repainted when inadequate protection is afforded against rust or corrosion. Equipment will not be repainted merely to change the color or gloss characteristics if the finish is serviceable. Spot paint, in lieu of refinishing previously painted sections, whenever practicable. Bare surfaces of sections of bodies and sheet metal, exposed by deterioration of paint or by accidents, will be spot painted immediately to prevent deterioration of the metal.

2.5.1.2 PAINTING STANDARDS AND AUTHORIZED COLORS. All Navy transportation equipment shall be treated and painted in accordance with Specification MIL-T-704C, Amendment A, and the colors of the paint will match the following color chips in Federal Standard No. 595 unless otherwise specified.

Red	Number 11105
Yellow	Number 13538
White	Number 17875
Med. Gray	Number 16187
Black	Number 17038
Aluminum	2 lbs aluminum pigment spec. TT-P-320 Type II Class B 1 gallon spar varnish MIL-V-1174

2.5.1.3 SPECIFIC COLORS FOR EQUIPMENT. The colors and markings specified for administrative use vehicles are described in detail in the publication *Joint Procedures For Management Of Administrative Use Motor Vehicles*, OPNAV P44-2. All vehicles and equipment used exclusively on aircraft landing areas will be painted yellow. The following colors are specified for other transportation equipment excluding those for tactical use.

Description	Equip. codes	Color	Markings	Special colors and/or markings
Motorcycles, scooters and bicycles	0902-0910	Yellow	Black	See Note (1)
Construction and allied equipment	2110-5930	Yellow	Black	See Notes (1) (2)
Railway cars	6100-6160 6400-6409 6459	Aluminum	Black	See Notes (2) (3)
Railway miscellaneous	6370, 6451 6210-6321 6600-6800	Yellow	Black	See Note (2)
Railway caboose	6340	Red	Black	See Note (2)
Railway locomotives	6510-6580	Yellow	Black	See Note (2)
Truck, fire, structural and crash	7100-7501	Red	Black	See Notes (1) (2)
Weight handling equipment	8120-8700	Yellow	Black	See Notes (1) (2)

Note (1): Black and/or yellow diagonal warning stripes (Reflectorized or nonreflectorized) are authorized for buses and other items of transportation equipment operating in congested industrial areas including construction, weight-handling, railway and for vehicles and equipment used exclusively for servicing aircraft on runways, taxiways, landing strips, etc.

Note (2): Black is authorized for the chassis or understructure of mobile truck and cruiser, cranes, structural fire and crash, railway cranes, railway cars, and railway locomotives.

Note (3): Exterior black with white lettering is authorized for car railway, dump, hopper, side and bottom dump.

Add Paragraph 2.5.1.4.

2.5.1.4 Painting of Administrative Use Motor Vehicles.

2.5.1.4.1 General. To relieve reported discomfort from high internal vehicle temperatures resulting from excessive solar absorption in certain areas, a deviation of the uniform colors prescribed in OpNav P44-2, (Joint Procedures for Management of Administrative Use Motor Vehicles, May 1967) is authorized.

2.5.1.4.2 Authorization. The use of white paint on the tops of administrative use vehicles in arid, tropical, and semitropical locations is authorized. This authorization is limited to those locations which experience a dry bulb temperature of 80°F or above for 1000 or more hours annually in accordance with the climatic data set forth in NavDocks P-89, Army, Navy, and Air Force Manual, Engineering Weather data dated April 1963.

2.5.1.4.3 Deviation. Deviation from the uniform color will be limited to painting vehicle tops white. Deviation is optional and will be based on the determination of the activity's Commanding Officer. Activities may be selective in that all tops of vehicles need not be painted white.

2.5.1.4.4 Colors. The following Vehicles Color and Identification Markings are applicable to U.S. Navy vehicles:

(1) Except as indicated below or elsewhere in the Joint Procedures for Management of Administrative Use Motor Vehicles and this publication, administrative use motor vehicles will be painted medium Navy gray No. 16187. Investigative vehicles must have USN Registration number painted in either the interior of the

glove compartment or trunk lid.
(2) Sedans will be painted black No. 17038.

(3) Aircraft, crash, rescue and other firefighting vehicles used in aircraft operations will be painted yellow No. 13538 gloss enamel, interior finish shall be light green No. 24524.

(4) Structural firefighting equipment will be painted red No. 11105 gloss enamel.

2.5.1.4.5 Markings.

(1) Gloss black No. 17038 markings shall be used on vehicles painted gloss gray, gloss yellow, gloss green, or gloss red.

(2) Gloss gray No. 16187 markings shall be used on vehicles painted gloss black.

(3) Gloss gold No. 17043 markings shall be used on executive (flag rank and above) sedans painted gloss black.

(4) Gloss white No. 17875 markings shall be used on recruiting vehicles painted gloss blue.

(5) Vehicles used as taxis may be identified by using supplemental markings, provided the markings are of a temporary nature. The markings must be easily removable so that the vehicle's special use application is not shown at the time of disposal or reassignment.

(6) Vehicles such as Shore Patrol, Metropolitan and Field Type Ambulances, Recruiting Vehicles and General Flag Officer Identification will be marked in accordance with the procedures outlined in this publication.

2.5.1.4.6 Installation and Activity Markings. As a general rule, the Navy does not mark vehicles to identify the activity. Where activity markings are required, the activity Commander is to be guided by the provisions of Chapter 2, Part 5 of this publication.

Section 2. IDENTIFICATION MARKINGS

2.5.2.1 APPLICATION OF REGISTRATION NUMBERS.

2.5.2.1.1 General. The Bureau's registration system for vehicles and equipment is described in detail in Chapter 1 of this publication. This system complies with the motor vehicle identification provisions of Regulations of the General Services Administrative Title 1 and Personal Property Management, March 1955 as amended, which were promulgated under the provisions of the Federal Property and Administrative Services Act of 1949, as amended, and Department of Defense Instruction 4505.2 as amended.

2.5.2.1.2 Location Of Registration Numbers. The location and other data covering the marking of administrative use vehicles for purposes of identification are contained in the publication *Joint Procedures For Management Of Administrative Use Motor Vehicles*, OPNAV P44-2. The registration numbers on other equipment are to be painted or applied on the exterior where there are suitable surfaces. Otherwise, registration numbers are to be painted, applied or stamped on a nonrusting metal plate and permanently affixed to the exterior by means of riveting, welding or locked bolts. The letters and numerals shall be marked in a visible area and kept in readable condition. The size of the letters and numerals shall conform to the sizes shown on Figures 39 and 40 when possible. Where small surfaces are unsuitable to the sizes shown on Figures 39 and 40, 1½-inch letters and numerals shall be used. When plates are used, the size may be varied to suit the size of the plate. In general, the registration number shall be applied to the rear and sides of equipment.

2.5.2.2 APPLICATION OF MARKINGS. Letters and numerals required for the markings prescribed herein shall be applied as follows.

(1) *Permanent Markings.* Permanent markings may be applied by either of the following methods.

(2) *Stencil And Paint Method.* This method requires the use of gummed-back (pressure sensitive) paper stencils, and painting the prescribed color of the marking over the stencil. After application of the stencils and before painting the webs must be removed from the letters and numerals on the stencils so that the numerals and stencils will appear without broken lines. Gummed-back (pressure sensitive) paper stencils are available from commercial sources in individual letters and numerals of assorted sizes and also in complete words such as "U. S. NAVY", "AMBULANCE", "POLICE", "FOR OFFICIAL USE ONLY", etc.

(3) *Decal Method (Nonreflectorized).* The decal method involves the application of pressure sensitive vinyl decals conforming to Military Specification MIL-F-8799A directly onto the equipment. These decals may be procured from commercial sources and are generally available in individual letters and numerals of various sizes. Order complete words on a transfer strip. Use of water transfer decals are not authorized.

(4) *Decal Method (Reflectorized).* Reflective, pressure sensitive vinyl marking decals conforming to Specification MIL-R-13689 are authorized only for vehicles and equipment used on aircraft landing areas. These decals are available from commercial sources and can be purchased with diecut and prespaced letters and numerals in sizes and colors that conform to Navy requirements.

2.5.2.3 REMOVAL OF MARKINGS. Upon permanent transfer to disposal agency or upon sale to commercial contractors, all Navy markings will be obliterated or removed from the equipment.

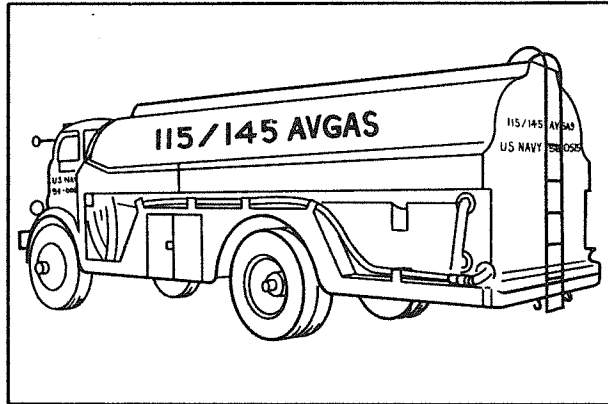
2.5.2.4 SPECIAL MARKINGS

2.5.2.4.1 General. The special marking authorized for ambulances, Armed Forces police vehicles, recruiting vehicles, shore patrol vehicles, rented vehicles, tank trucks and school buses are described in the publication *Joint*

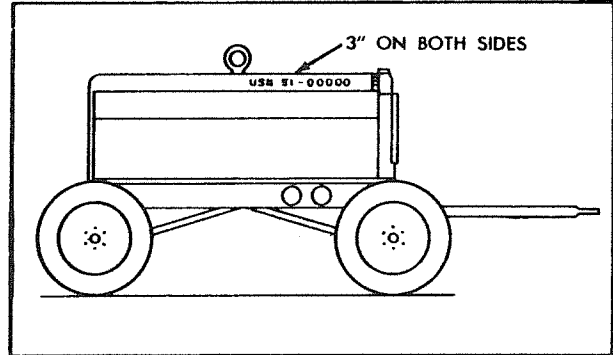


FIGURE 39

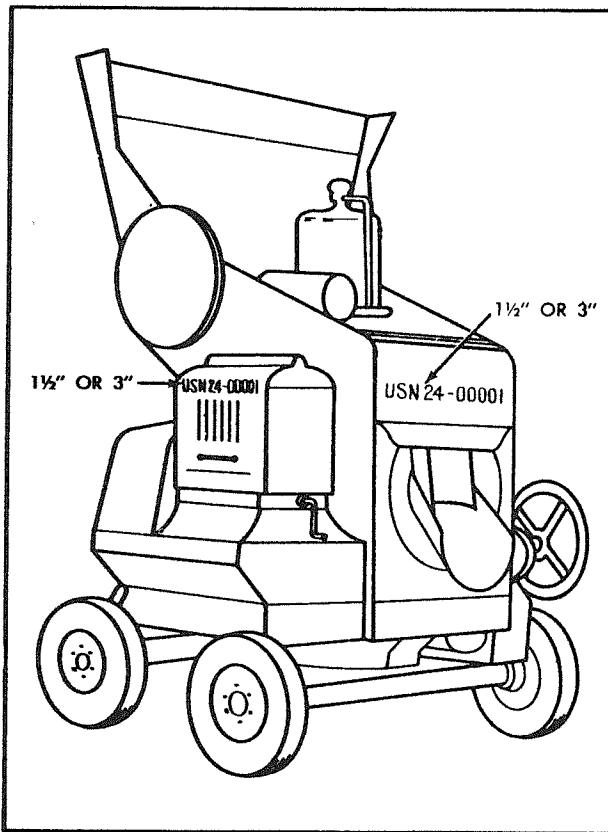
Size of Lettering and Numerals on Construction Equipment



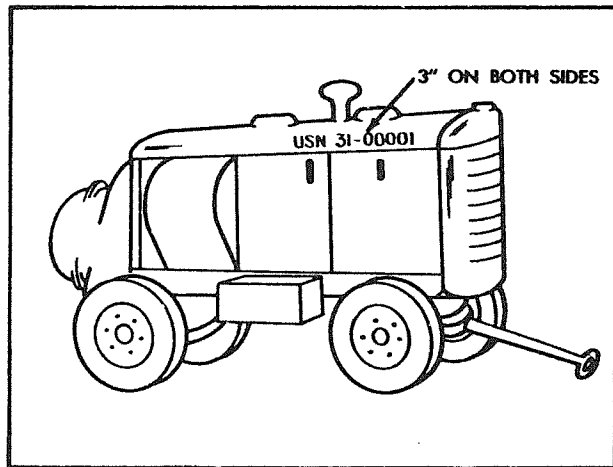
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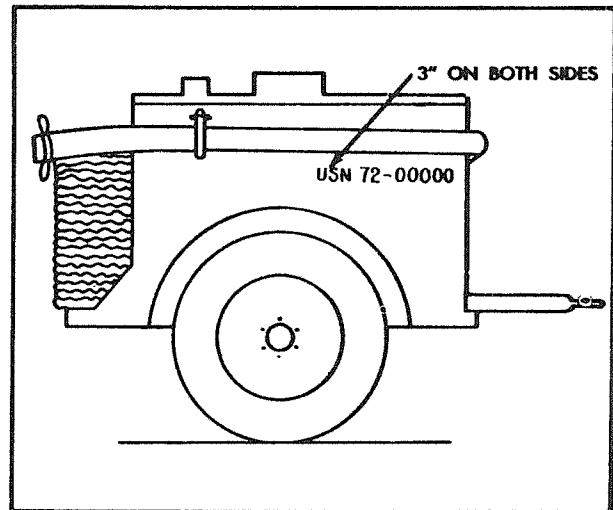
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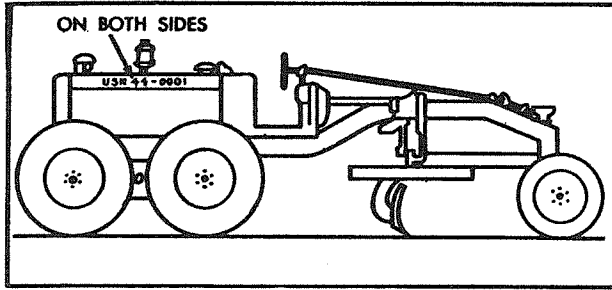


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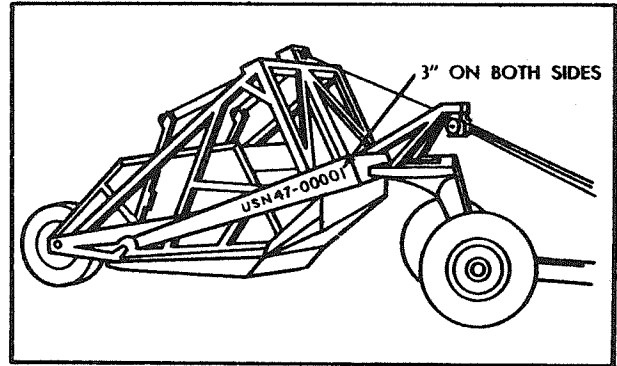


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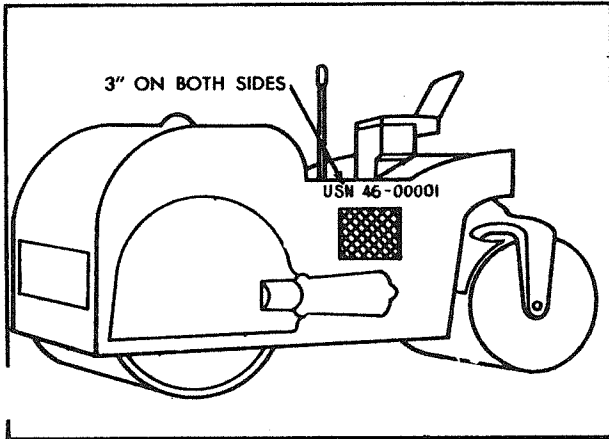
FIGURE 40
Size and Location of Markings (1 of 5)



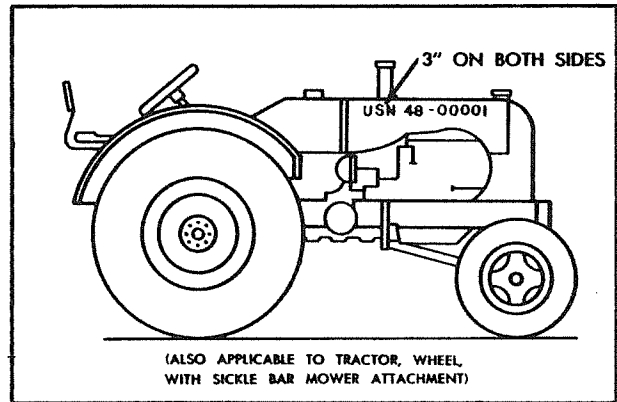
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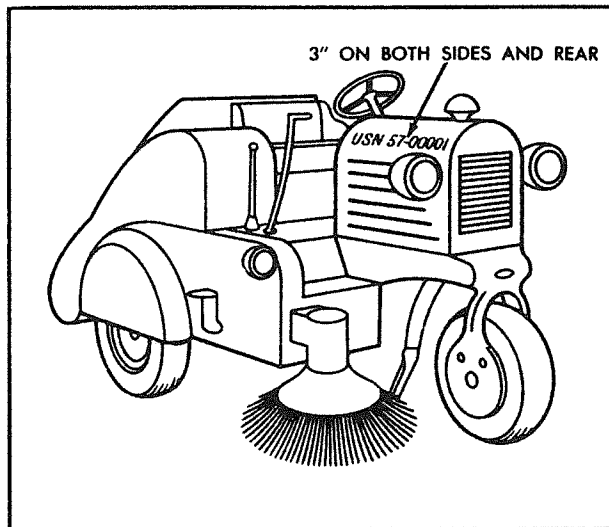
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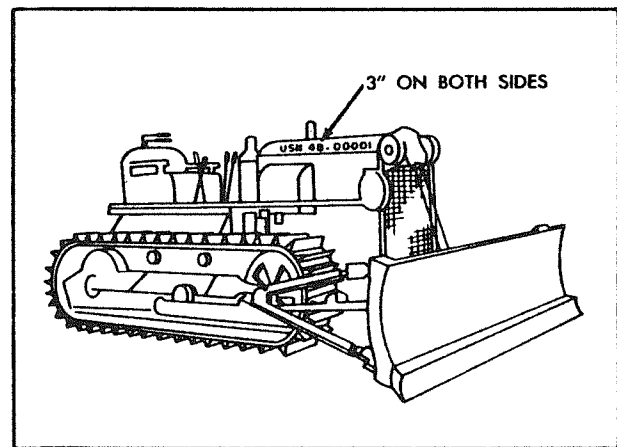
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(10)

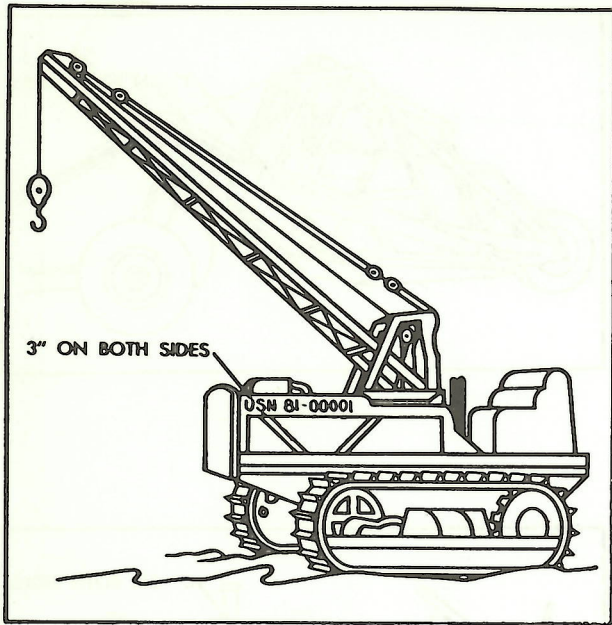


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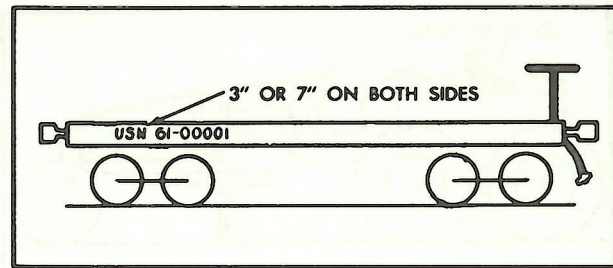


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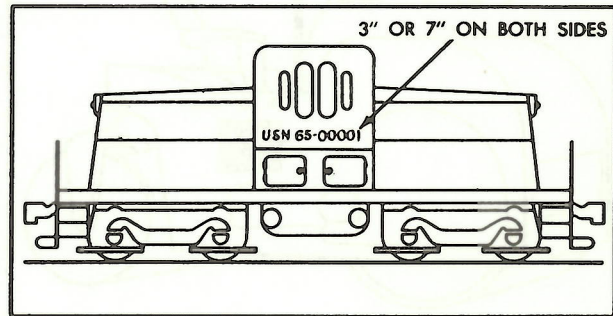
FIGURE 40
Size and Location of Markings (2 of 5)



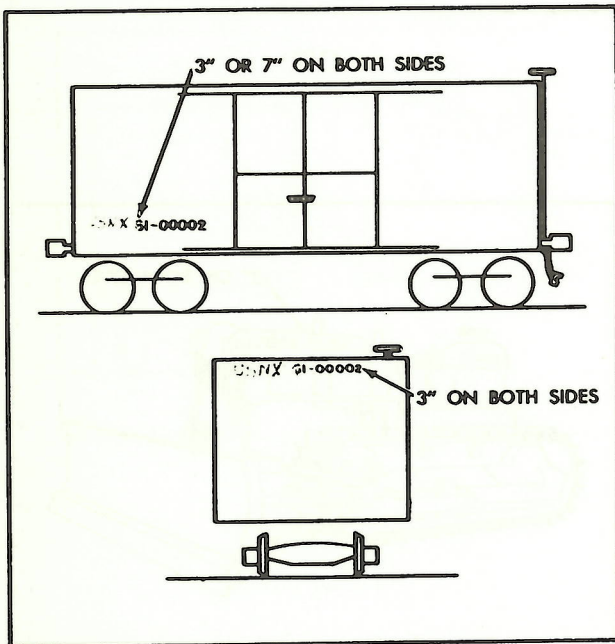
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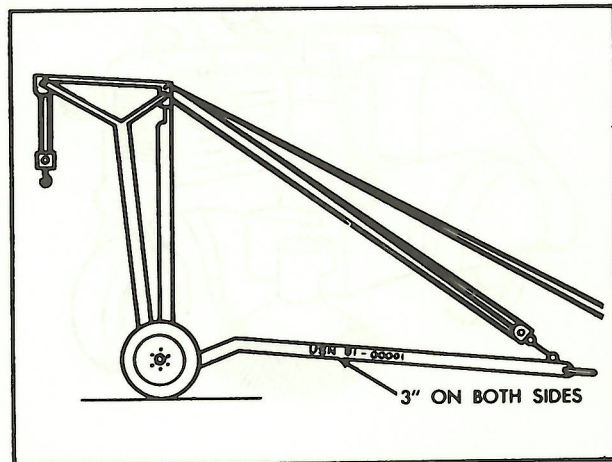
(14)



(15)

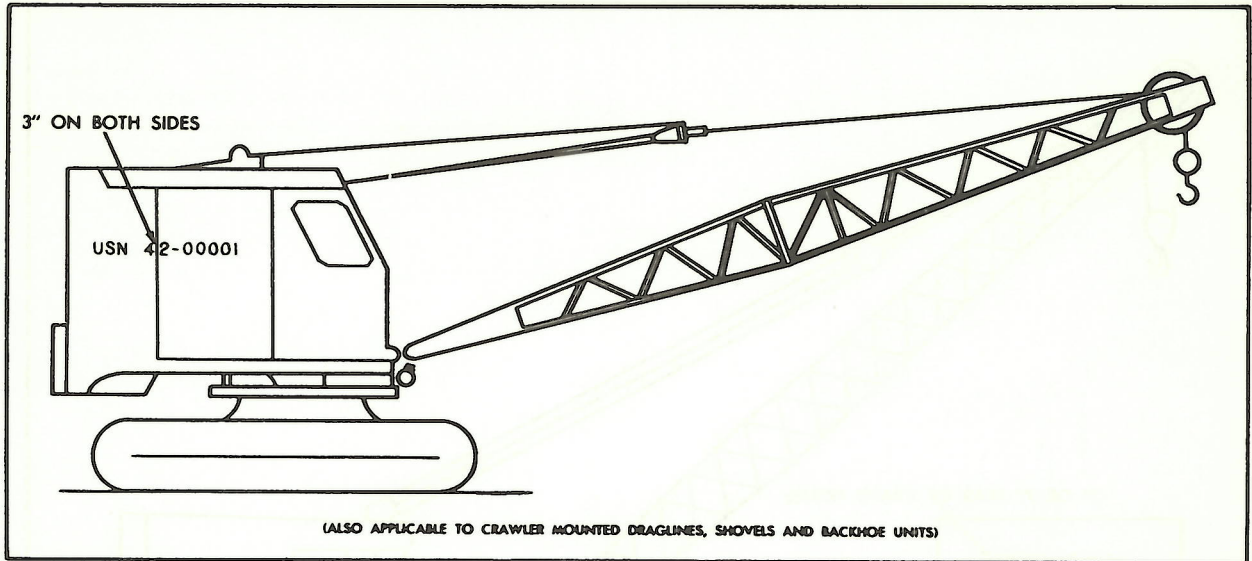


(13)

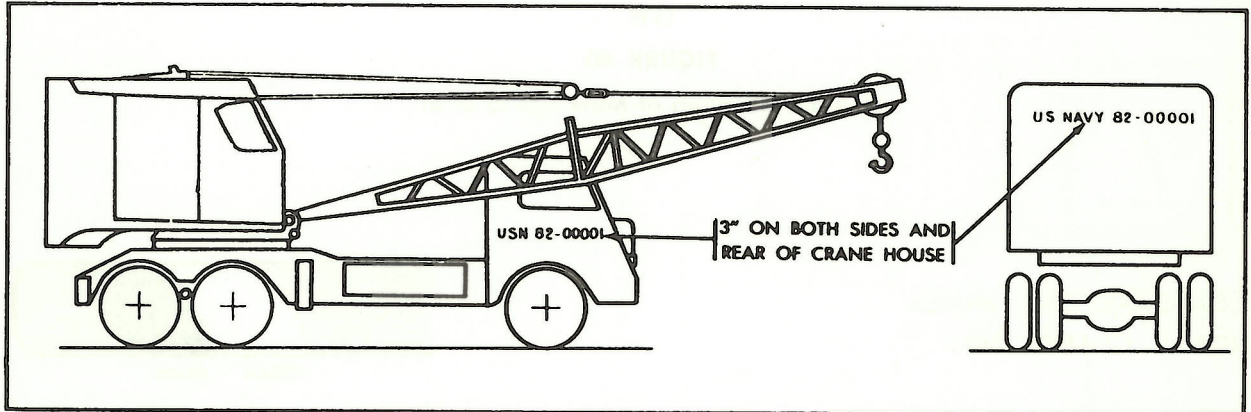


(16)

FIGURE 40
Size and Location of Markings (3 of 5)

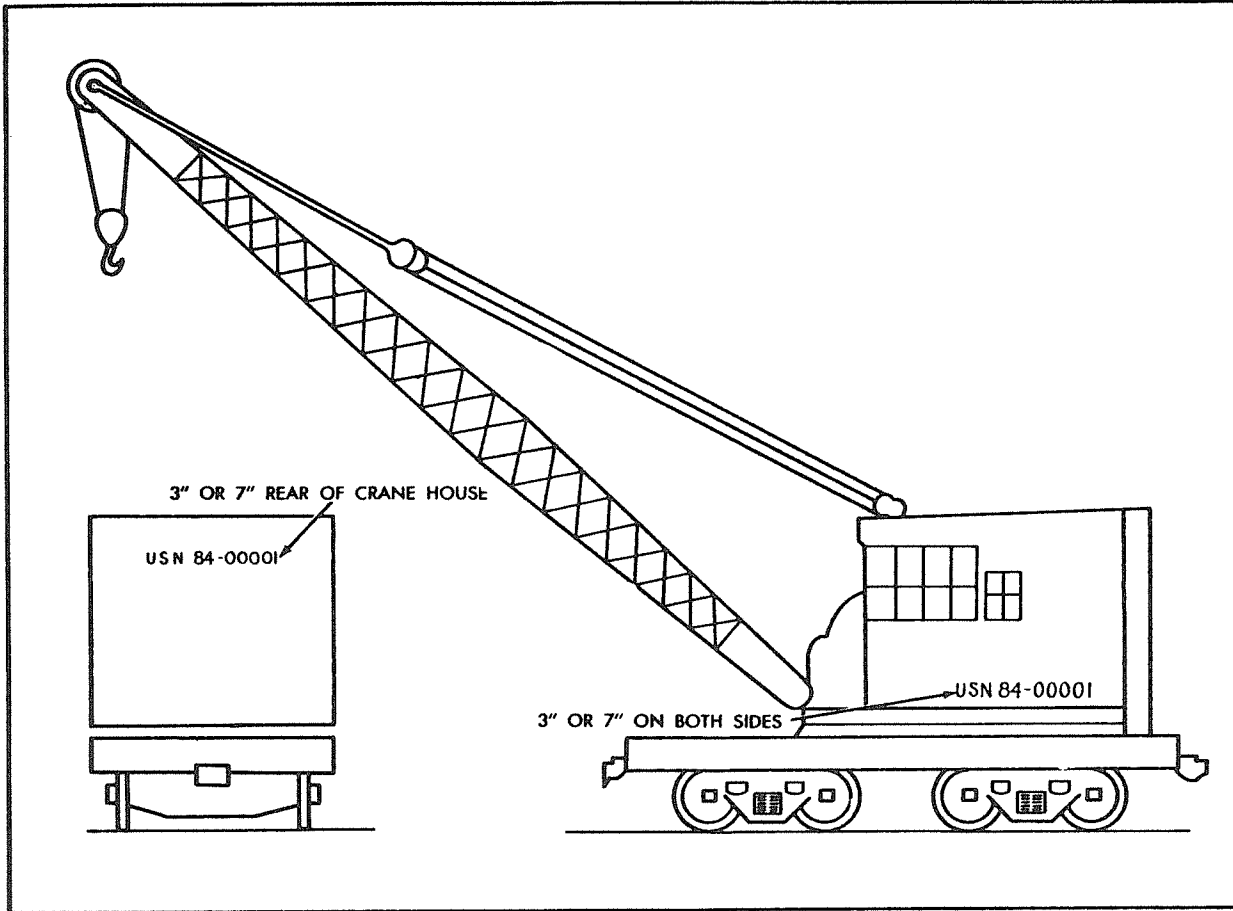


(17)



(18)

FIGURE 40
Size and Location of Markings (4 of 5)



(19)

FIGURE 40

Size and Location of Markings (5 of 5)

CHESAPEAKE BAY ANNEX
RANDALL CLIFF, MD.

NAVAL AIR STATION
PATUXENT RIVER, MD.

NAVAL ORDNANCE EXPERIMENTAL UNIT
WASHINGTON, D. C.



GREEN BROWN



BLUE



BLUE YELLOW

FIGURE 41

Identification of Motor Vehicles by Bumper Codes

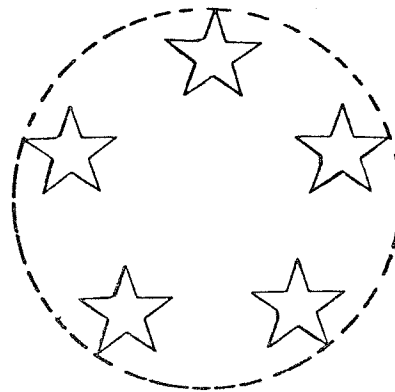
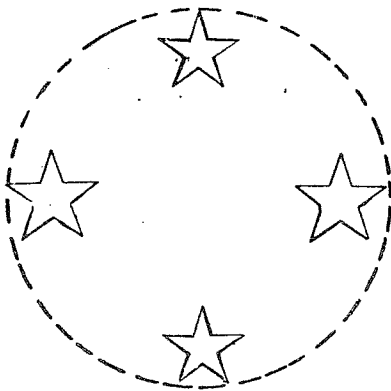
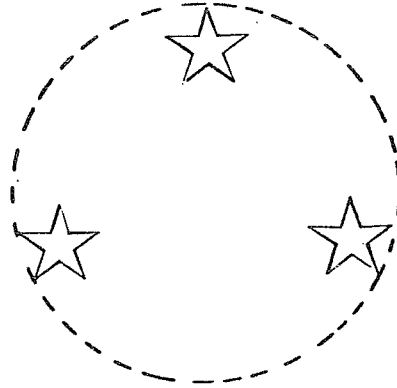
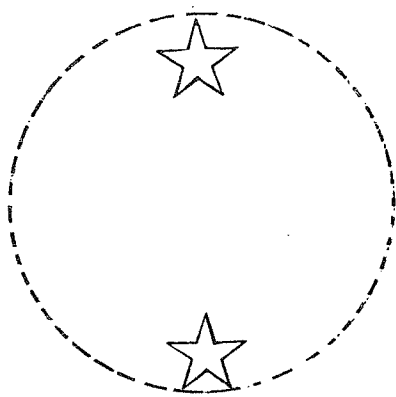
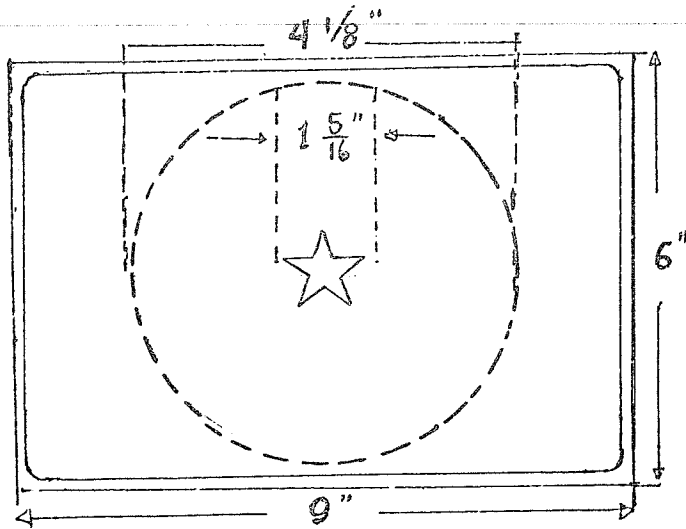


Figure 41A Navy flag officer designation plate.

1. Vehicle flag plates of flag officers eligible for command at sea will consist of white stars on a blue background.
2. Vehicle flag plates of flag rank specialists not eligible for command at sea will consist of blue stars on a white background.

The following paragraph reads as an addition to paragraph 2.5.2.4.1

Shore Patrol Vehicles. Vehicles assigned to shore patrol units require special identification as such and will have the words "Shore Patrol" in 3-inch letters above the identification markings on each front door. Also the words "Shore Patrol" will appear on the front and rear of the vehicle placed in such a manner that they will be readily visible to the front and rear of the vehicle.

The following paragraph reads between paragraph 2.5.2.4.1 and 2.5.2.4.3

2.5.2.4.2. Recruiting Vehicles. Vehicles used for recruiting purposes may display signs and slogans in accordance with the effective edition of the U.S. Navy Recruiting Manual, NavPer's 15838. Slogans and signs shall be affixed to the vehicle in such a manner as to preclude interference with the vehicle identification markings.

Renumber paragraph 2.5.2.4.2 to 2.5.2.4.3, 2.5.2.4.3 to 2.5.2.4.4, 2.5.2.4.4 to 2.5.2.4.5, 2.5.2.4.5 to 2.5.2.4.6, 2.5.2.4.6 to 2.5.2.4.7, 2.5.2.4.7 to 2.5.2.4.8, 2.5.2.4.7.1 to 2.5.2.4.8.1, 2.5.2.4.7.2 to 2.5.2.4.8.2.

Procedures for Management of Administrative Use Motor Vehicles, OPNAV P44-2.

2.5.2.4.2 Aircraft-Servicing Tank Trucks and Trailers. Reflectorized lettering numerals and warning stripes on vinyl material conforming to Specification MIL R-13689A are prescribed for tank trucks and tank trailers used for the delivery of aviation fuel and lubricating oils to Naval aircraft. In addition to the standard markings prescribed for administrative use vehicles in OPNAV P44-2, these tank trucks and trailers will be marked with the appropriate designation of the liquid being transported. Marking shall be at least 12 inches high, and shall occupy at least two-thirds of the length of each side of the tank. If this size of lettering is too large for the tank, the size of the letters shall be the largest appropriate and shall occupy at least two-thirds of the available length of space on each side of the tank. Product designations shall be as follows.

DESCRIPTION	LETTERING
Aviation gasoline, Grade 80 octane	80 AVGAS
Aviation gasoline, Grade 91 octane	91 AVGAS
Aviation gasoline, Grade 100/130 octane	100/130 AVGAS
Aviation gasoline, Grade 115/145 octane	115/145 AVGAS
Jet Fuel, Grade JP-3	JP-3
Jet Fuel, Grade JP-4	JP-4
Jet Fuel, Grade JP-5	JP-5
Lubricating Oil, Grade 1100	AVLUBE 1100
Lubricating Oil, Grade 1065	AVLUBE 1065
Lubricating Oil, Grade 1010	JET LUBE 1010

When Navy aircraft servicing tank trucks or trailers are used for dispensing approved NATO aviation fuels and lubricants, the equipment shall be suitably marked with the NATO symbols as well as with the national designator. Appendix L contains a listing of the most commonly used aviation fuels, lubricants and associated products together with the equivalent national specifications for each participating NATO nation. It is intended that Appendix L shall serve as a guide for selecting the appropriate NATO symbol for marking of U.S. Navy aircraft servicing tank trucks or trailers. The NATO symbol shall be clearly distinguished from the standard markings by enclosing the symbol in a rectangle as illustrated F-22. The rectangle may be a continuous or broken line, depending on whether a stencil is used. The marking shall always be as large and conspicuous as practicable. The color of the NATO marking shall contrast with the background color of the aircraft servicing unit. Red, how-

ever, shall not be used for letters, figures or the outline of the rectangle.

2.5.2.4.3 Painting On Removable Plates. To provide flexibility of refuelers at those stations that are frequently required to transfer units from one fuel to another, it shall be permissible to paint the signs on removable plates that can be bolted in place.

2.5.2.4.4 Aircraft Servicing and Aviation Mobile Ordnance Equipment. Vehicles and equipment used primarily for service, maintenance, construction and emergency purposes on landing areas shall be marked in a distinctive manner for a high degree of visibility. In addition to the yellow paint prescribed in Par. 2.5.1.3, black and yellow warning stripes will be applied to the rear of these equipments. The rear flat surface will be painted black, then four-inch stripes of yellow reflectorized sheeting conforming to Specification MIL-R-13689 shall be applied four inches apart at an incline of 45 degrees from the left and right of the center vertical starting pattern.

2.5.2.4.5 Temporary Identification of Vehicles. Vehicles not ordinarily used on landing areas, runways, taxiways or peripheral roads must be readily identifiable whenever they travel over any part of the landing area. Each such vehicle is required to carry a flag on a staff attached to the vehicle. This flag will be at least three feet square and will consist of one-foot squares of alternate international orange and white on both sides.

2.5.2.4.6 Colored Stripes On Bumpers For Identification Of Administrative Vehicles. When it is considered necessary for immediate recognition by security forces, a color scheme consisting of one or more two-inch diagonal stripes on the bumpers is authorized. The colored stripes may be applied with either paint or pressure sensitive material in the manner illustrated in Figure 41. In order to avoid color duplication, color codes will be established within Naval districts, areas, or similar commands by BUDOCKS Field Engineering Offices.

2.5.2.4.7 Black and Yellow Warning Stripes

2.5.2.4.7.1 Buses. All buses, other than the school buses whose markings are covered by state or local law, will be striped front and rear with diagonal safety markings. The extent of these markings will be dependent upon the type and model of the vehicles concerned but will not exceed an overall dimension of 12 x 45 inches. The stripes shall be applied in alternate four-inch bands of black and yellow.

low (paint or pressure sensitive material) inclined 45 degrees to left and right of the center vertical starting pattern.

2.5.2.4.7.2 Vehicles, construction and allied equipment. Variations in sizes and configurations as well as safety requirements necessitated by

local conditions prohibit the establishment of uniform instructions for this type of markings. Such markings are authorized when in the opinion of the Commanding Officer they will contribute to the safe operation of the equipment.

The following paragraph reads after paragraph 2.5.2.4.8.2

2.5.2.4.9 Flag Officer and VIP's Identification. Flag Officers, Staff Officers of flag rank and VIP's are authorized to display their flag rank on sedans by means of a special plate. All identification, painting and marking instructions herein prescribed are to be strictly adhered to as required by law. Flag rank displays are to be confined to a plate attached to the front of the vehicle. Stars or replicas of personal flags are not to be painted on surfaces of the vehicle. The special flag plate must be covered when the flag officer or VIP is not aboard. Officers and VIP's authorized to display a personal flag or Command pennant may display such a flag forward on the vehicle when riding in the vehicle on an official occasion.

2.5.2.4.10 Metropolitan Ambulance. In addition to other prescribed identification markings, metropolitan ambulances will be marked as follows. The words "Medical Department" will be centered above the designation U.S. Navy on the side of the vehicle doors. If space permits, the word "ambulance", in $1\frac{1}{2}$ inch black letters, will be centered on the vehicle body 2 inches above the windshield. Two 3-inch red crosses (Color No. 11105) each on a 4-inch square white field, are to be spaced transversely on 28-inch centers, 2 inches above the windshield. One 6-inch red cross on an 8-inch square white field is to be centered above the designation U.S. Navy on the rear. If space is not adequate, two 3-inch red crosses, each on a 4-inch square white field may be placed one on each side of the license bracket on the lower portion of the rear door.

2.5.2.4.11 Field Type 4x4 Ambulance. Lettering for the field-type ambulance

is the same as that prescribed for the metropolitan-type ambulance, except that the word "ambulance" above the windshield will be in 3-inch letters and the two red crosses above the windshield will be 6-inches high, each on a 8-inch square white field. Two 6-inch red crosses, each on an 8-inch square white field, are to be placed on the lower portion of the rear door.

2.5.2.4.12 Ambulances Used In Air-ground Search and Rescue Operation. A red cross on a white background may be centered on the top of the ambulance for more effective coordination of rescue efforts. Size of the cross will depend on the vehicle configuration and visual identification requirements from the air.

2.5.2.4.13 Safety Markings. Navy vehicles used for the transportation of explosives and other dangerous articles will be operated in accordance with the effective edition of the Drivers Handbook Ammunition, Explosives, and Dangerous Articles (NAVORD OP 2239) or other command directives.

2.5.2.4.14 Exemptions from Identification Markings. The exemption referred to in OPNAV P-44-2 (Reference 5), of this manual is modified to apply only to exterior markings and identification for Navy vehicles. Navy vehicles which are exempted from exterior markings will be identified by painting the USN registration number on the engine side of the firewall, on the underside of the trunk lid or on the inner side of the glove compartment lid. In lieu of painting, the registration number may be stamped on a corrosion-resistant metal plate to be affixed to either of the above prescribed locations.

2.5.2.4.15 Additional Exemptions. Requests for additional exemptions will be submitted to the Chief of Naval Operations (OP-44) via command channels, the appropriate Naval Facilities

Engineering Command Field Division
and the Commander, Naval Facilities
Engineering Command.

2.5.2.4.16 Records of Exempted Vehicles. Each Naval Facilities Engineering Command Field Division will maintain current inventory records of all administrative use motor vehicles that are authorized exemption from the identification and marking provisions of OPNAV P-44-2 (Reference 5). Measures will be instituted to assure that such vehicles are used for official purposes only.