

(49 CFR 1.40) and filed within 15 days from the date of publication of this notice in the FEDERAL REGISTER.

LONG-AND-SHORT HAUL

FSA No. 41168—*Phthalic anhydride to Kingsport, Tenn.* Filed by Southwestern Freight Bureau, agent (No. B-9020), for interested rail carriers. Rates on phthalic anhydride, in tank carloads, subject to Rule 35 of the uniform freight classification but not less than 100,000 pounds per car, from Chocolate Bayou, Tex., to Kingsport, Tenn.

Grounds for relief—Market competition.

Tariff—Supplement 178 to Southwestern Freight Bureau, agent, tariff ICC 4534.

By the Commission.

[SEAL] H. NEIL GARSON,
Secretary.

[P.R. Doc. 67-13473; Filed, Nov. 15, 1967;
8:47 a.m.]

**FOURTH SECTION APPLICATIONS
FOR RELIEF**

NOVEMBER 13, 1967.

Protests to the granting of an application must be prepared in accordance with Rule 1.40 of the general rules of practice (49 CFR 1.40) and filed within 15 days from the date of publication of this notice in the FEDERAL REGISTER.

LONG-AND-SHORT HAUL

FSA No. 41169—*Liquid caustic soda from Calvert, Ky.* Filed by O. W. South, Jr., agent (No. A5067), for interested rail carriers. Rates on liquid caustic soda, in tank carloads, from Calvert, Ky., to Fairfax, Lanett, Opelika, and Pepperell, Ala.

Grounds for relief—Market competition.

Tariff—Supplement 160 to Southern Freight Association, agent, tariff ICC S-484.

FSA No. 41170—*Livestock from and to Points in Western Trunk Line territory.* Filed by Western Trunk Line Committee, agent (No. A-2526), for interested rail carriers. Rates on feeder or stocker livestock, in carloads, from points in Colorado, Idaho, Montana, Nevada, Oregon, Utah, and Wyoming, on the Union Pacific Railroad Co., to points in Western Trunk Line territory.

Grounds for relief—Modified short-line distance formula and grouping.

Tariffs—Supplement 23 to Western Trunk Line Committee, agent, tariff ICC A-4579, and other tariffs named in the application.

By the Commission.

[SEAL] H. NEIL GARSON,
Secretary.

[P.R. Doc. 67-13474; Filed, Nov. 15, 1967;
8:47 a.m.]

[Notice 493]

**MOTOR CARRIER TEMPORARY
AUTHORITY APPLICATIONS**

NOVEMBER 13, 1967.

The following are notices of filing of applications for temporary authority under section 210a(a) of the Interstate Commerce Act provided for under the new rules of Ex Parte No. MC 67 (49 CFR Part 340) published in the FEDERAL REGISTER, issue of April 27, 1965, effective July 1, 1965. These rules provide that protests to the granting of an application must be filed with the field official named in the FEDERAL REGISTER publication, within 15 calendar days after the date of notice of the filing of the application is published in the FEDERAL REGISTER. One copy of such protest must be served on the applicant, or its authorized representative, if any, and the protests must certify that such service has been made. The protests must be specific as to the service which such protestant can and will offer, and must consist of a signed original and six copies.

A copy of the application is on file, and can be examined at the Office of the Secretary, Interstate Commerce Commission, Washington, D.C., and also in the field office to which protests are to be transmitted.

MOTOR CARRIERS OF PROPERTY

No. MC 78276 (Sub-No. 2 TA) (Republication), filed October 2, 1967, published FEDERAL REGISTER issue of October 10, 1967, and republished this issue. Applicant: MAZZEO & SONS EXPRESS, 173 Wortendyke Avenue, Emerson, N.J. 07630. Applicant's representative: Herman B. J. Weckstein, 1060 Broad Street, Newark, N.J. 07102. Authority sought to operate as a common carrier, by motor vehicle, over irregular routes, transporting: *Wearing Apparel*, on hangers, between the plantsite of Gilbert Carrier Corp. of Secaucus, N.J., on the one hand, and, on the other, points in Bergen, Essex, Hudson, Morris, Passaic, and Union Counties, N.J., and Rockland County, N.Y., for 180 days. NOTE: The above grant will authorize the carrier to interline with Gilbert Carrier Corp., Secaucus, N.J. The purpose of this republication is to include interlining information. Supporting shipper: Gilbert Carrier Corp., 1 Gilbert Drive, Secaucus, N.J. 07094. Send protests to: District Supervisor, Joel Morrows, Bureau of Operations, Interstate Commerce Commission, 1060 Broad Street, Newark, N.J. 07102.

No. MC 118803 (Sub-No. 3 TA), filed November 7, 1967. Applicant: ATLANTIC TRUCK LINES, INC., 179 Ellison Street, Paterson, N.J. 07505. Applicant's representative: Priest & Carson, 71-23 Austin Street, Forest Hill, N.Y. Authority sought to operate as a contract carrier, by motor vehicle, over irregular routes, transporting: (a) *Manufactured sheet metal roofing components such as gutter, leader, edging, elbows, mitres, hangers, hooks and other related fittings and component parts, roofing material accessories such*

as roofing paper, gutter seal, roofing cement, mastic caulking compounds, roofing paints, and sealers, nails, screws, and related component materials, *sheet metal working and roofing tools (other than power)* such as riveting guns, caulking guns, tinner's snips, tinner's fire pots, and related hand tools, and working supplies used in connection with the erection of buildings, homes, etc. at jobsites, *metal manufactured ventilating, air conditioning and heating components* such as ducts, pipes, elbows, draft regulating dampers, "T's, diverters, vents, dryer vents, duct fittings, and other related fittings and component parts; ferrous and nonferrous metals in the form of sheets, coils, tubing, wire, bars, forgings, castings, and extrusions, *metal structural and ornamental building elements, accessories and materials* such as wall corner beads, wall ties, joint bridging, joint supports, building studs, brackets, louvers and vents, shutters, area walls, corrugated sheeting, reflecting and other insulating materials as well as other related components, from the plantsite of L. Bieler & Sons, Inc., National Elbow and Fitting Corp., Bieler International Corp., and Southern Diversified Industries, Inc., located at Hauppauge, Suffolk County, N.Y., to points in Minnesota, New Mexico, Utah, Colorado, North Dakota, South Dakota, Montana, Wyoming, Idaho, Nevada, California, Arizona, Oregon, and Washington; and

Returned shipments of the commodities specified above. From points in the destination States named above, to the plantsite of L. Bieler & Sons, Inc., National Elbow and Fitting Corp., Bieler International Corp., and Southern Diversified Industries, Inc., located at Hauppauge, Suffolk County, N.Y. Restriction: The operations authorized herein are limited to a transportation service to be performed, under a continuing contract, or contracts, with L. Bieler & Sons, Inc., National Elbow and Fitting Corp., Bieler International Corp., and Southern Diversified Industries, Inc., all of Hauppauge, Suffolk County, N.Y. (b) raw materials and related products used in the manufacturing, fabricating, distribution and sales of the commodities listed in (a) above by L. Bieler & Sons, Inc., National Elbow and Fitting Corp., Bieler International Corp., and Southern Diversified Industries, Inc., from the points in the destination States named in (a) to the plantsite of L. Bieler & Sons, Inc., National Elbow and Fitting Corp., Bieler International Corp., and Southern Diversified Industries, Inc., located at Hauppauge, Suffolk County, N.Y. Restriction: The operations authorized herein are limited to a transportation service to be performed, under contract or contracts, with L. Bieler & Sons, Inc., National Elbow and Fitting Corp., Bieler International Corp., and Southern Diversified Industries, Inc., all of Hauppauge, Suffolk County, N.Y., for 180 days. Supporting shipper: L. Bieler & Sons, Inc., National Elbow and Fitting Corp., Bieler International Corp., South-

ern Diversified Industries, Inc., Cardinal Industrial Park, Hauppauge, N.Y. 11788. Send protests to: District Supervisor, Joel Morriss, Bureau of Operations, Interstate Commerce Commission, 1060 Broad Street, Newark, N.J. 07102.

No. MC 129230 (Sub-No. 1 TA), filed November 8, 1967. Applicant: WALTER E. RIPKO, Box 354, Republic, Pa. 15475. Applicant's representative: Arthur J. Diskin, 302 Frick Building, Pittsburgh, Pa. 15219. Authority sought to operate as a contract carrier, by motor vehicle, over irregular routes, transporting: Sugar, in bags, bales, and boxes, from Cincinnati, Ohio, to Pittsburgh, Belle Vernon, Washington, and Republic, Pa., for 180 days. Supporting shipper: Colonial Sugars Co., Gramercy Refinery, Gramercy, La. 70052. Send protests to: Frank L. Calvary, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 2109 Federal Building, 1000 Liberty Avenue, Pittsburgh, Pa. 15222.

No. MC 29423 (Sub-No. 1 TA), filed November 8, 1967. Applicant: ADBY CONSTRUCTION & TRANSPORT CO. LTD., 7204 18th Avenue, Edmonton, Alberta, Canada. Applicant's representative: Howard C. Burton, 504 Strain Building, Great Falls, Mont. 59401. Authority sought to operate as a contract carrier, by motor vehicle, over irregular routes, transporting: Lime, in bags from ports of entry at or near Roosville, Mont.; Eastport, Idaho, and Porthill, Idaho, and Montana; and lumber from Laurier, Wash., on the international boundary line between the United States and Canada to points in Washington, Idaho, and Montana; and lumber from points in Flathead and Lincoln Counties, Mont., to the port of entry at or near Roosville, Mont., on the international boundary line between the United States and Canada, for 180 days. Supporting shippers: Cooper-Widman, Ltd., Post Office Box 2069, Vancouver 3, Canada, Summit Lime Works, Ltd., Post Office Box 700, Lethbridge, Alberta, Canada. Send protests to: Paul J. Labane, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 251 U.S. Post Office Building, Billings, Mont. 59101.

By the Commission.

[SEAL] H. NEIL GARSON,
Secretary.

[F.R. Doc. 87-13475; Filed, Nov. 15, 1967;
8:48 a.m.]

[Notice 50]

MOTOR CARRIER TRANSFER PROCEEDINGS

NOVEMBER 9, 1967.

Synopses of orders entered pursuant to section 212(b) of the Interstate Commerce Act, and rules and regulations prescribed thereunder (49 CFR Part 279), appear below:

As provided in the Commission's special rules of practice any interested person may file a petition seeking reconsideration of the following numbered pro-

ceedings within 20 days from the date of publication of this notice. Pursuant to section 17(8) of the Interstate Commerce Act, the filing of such a petition will postpone the effective date of the order in that proceeding pending its disposition. The matters relied upon by petitioners must be specified in their positions with particularity.

No. MC-FC-69810. By order of October 30, 1967, the Transfer Board approved the transfer to Cowboy Van Lines, Inc., 1785 Chester Street, Aurora, Colo. 80101, of the operating rights of K. P. Moving & Storage, Inc., 3722 Chestnut Place, Denver, Colo. 80216, in certificates Nos. MC-126749 (Sub-No. 2) and MC-126749 (Sub-No. 9), and a portion of the operating rights in certificate No. MC-126749 (Sub-No. 8), issued December 13, 1965, December 20, 1966, and October 4, 1966, respectively, authorizing the transportation, over irregular routes, of general commodities, except commodities in bulk, household goods, and other specified commodities, between Denver, Co., on the one hand, and, on the other, points within 15 miles of Denver, with specified exceptions, of household goods, between Boulder, Colo., on the one hand, and, on the other, points in Iowa, Kansas, Missouri, Nebraska, Illinois, Indiana, and Wisconsin, and of household goods, as defined, between points in Montrose, Delta, and Gunnison Counties, Colo., on the one hand, and on the other, points in Utah on and east of U.S. Highway 91, and those in Colorado on and west of U.S. Highway 85.

No. MC-FC-69848 (Republication). By order entered October 31, 1967, the Transfer Board, on reconsideration, approved the transfer to Bonita Motor Line, Inc., Kansas City, Mo., of an additional portion of the operating rights in certificate No. MC-79619 issued July 13, 1967, to Eagle Express, Inc., Kansas City Mo., supplementing the previous order entered herein on September 8, 1967. The operating rights transferred, as modified are as follows: General commodities, with usual exceptions, over regular routes, between Kansas City, Kans., and Rich Hill, Mo., serving the intermediate points of Kansas City, Piasale, and Butler, Mo.; and between Kansas City, Kans., and Walker, Mo., serving the intermediate and off-route points of Kansas City, Prairie City, Papinsville, Rockville, Schell City, Taberville, Fair Haven, and Harwood, Mo., those within 5 miles of the intermediate and off-route points named; Lumber, cement, sheet metal, brick, meat scraps, and tankage, over a regular route, from Kansas City, Kans., to Schell City, Mo., serving no intermediate points; livestock, oil in drums and packages, tires, batteries, packinghouse products as defined by the Commission, feed, tankage, and cheese boxes, over a regular route, from Kansas City, Kans., to Rockville, Mo., serving the intermediate and off-route points within 8 miles of Rockville for delivery only; livestock, cheese, and empty oil drums, over regular routes, from Rockville, Mo., to Kansas City, Kans., serving the intermediate and off-route points within 8 miles of Rockville for pickup

only, and from Rockville over the route specified next above to Kansas City, Kans.; brick and machinery, over irregular routes, from Parsons and Weir, Kans., to Schell City, Mo.; and threshing machines, over irregular routes, from Des Moines, Iowa, to Schell City, Mo. Tom B. Kretsinger, 450 Professional Building, Kansas City, Mo., attorney for applicants.

No. MC-FC-69941. By order of October 31, 1967, the Transfer Board approved the transfer to East Side Cartage, Inc., Toledo, Ohio, of the corrected certificate of registration in No. MC-120128 (Sub-No. 1) issued June 18, 1965, to Glenn O. Tonjes, doing business as East Side Cartage, Toledo, Ohio, and evidencing a rights of the holder to engage in interstate or foreign commerce corresponding in scope to the grant of authority in certificate of public convenience and necessity No. 8376-I, dated September 22, 1958, issued by the Public Utilities Commission of Ohio. Charles R. Barefoot, Jr., 640 Spitzer Building, Toledo, Ohio 43604, attorney for applicants.

No. MC-FC-69955. By order of October 31, 1967, the Transfer Board approved the transfer to Providence-Springfield Despatch, Inc., Providence, R.I., of the operating rights in certificate No. MC-59666 issued March 3, 1942, to Philip A. Wheeler, doing business as Providence-Springfield Despatch, Providence, R.I., authorizing the transportation of general commodities, with exceptions, over regular routes, between Providence, R.I., and Holyoke, Mass. Henry E. Laliberte, 49 Westminster Street, Providence, R.I. 02903, attorney for applicants.

No. MC-FC-69981. By order of October 30, 1967, the Transfer Board approved the transfer to Wagner Tours, Inc., North Haledon, N.J., of the operating rights in certificate No. MC-44252 issued May 17, 1955, to Herman Wagner and Clara Wagner, doing business as Wagner Tours, North Haledon, N.J., authorizing the transportation of: Passengers and their their baggage, restricted to traffic originating at the points and in the territory indicated, in charter operations, from Paterson, N.J., and points in New York and New Jersey within 15 miles of Paterson, to points in New Jersey and New York, and those in Pennsylvania on and east of U.S. Highway 11, and return. Samuel A. Wiener, 115 Market Street, Paterson, N.J. 07508, attorney for applicants.

No. MC-FC-69984. By order of October 31, 1967, the Transfer Board approved the transfer to Lucien Bisson, Inc., a corporation, Bath, Maine, of certificate of registration No. MC-99625 (Sub-No. 1) issued December 22, 1965, to Lincoln's Motor Express, a corporation, South Portland, Maine, authorizing the transportation, in interstate or foreign commerce of: Freight or merchandise, between points in Maine. David R. Hastings, LL, 8 Portland Street, Fryeburg, Maine 04037, attorney for applicants.

No. MC-FC-69985. By order of October 30, 1967, the Transfer Board approved the transfer to Gearhart's Moving

& Storage, Inc., Altoona, Pa., of the operating rights in certificate No. MC-37081 issued January 13, 1966, to William Gearhart and Patricia Louise Gearhart, doing business as Dinges Transfer, Altoona, Pa., authorizing the transportation of household goods between Altoona, Pa., and points within 25 miles thereof, on the one hand, and on the other, points in Delaware, Maryland, Michigan, New York, New Jersey, Ohio, Virginia, West Virginia, and the District of Columbia; electric refrigerators in crates, from Connersville, Ind., to Altoona and Johnstown, Pa.; and electric ranges and ironers, in crates, from Mount Clemens, Mich., to Altoona and Johnstown, Pa. Leo C. Mullen, 1311 12th Street, Altoona, Pa. 16601, attorney for applicants.

No. MC-FC-69986. By order of October 31, 1967, the Transfer Board approved the transfer to French, Lt., of Houston, Inc., Houston, Tex., of Certificate of registration No. MC-120571 (Sub-No. 1) issued January 29, 1965, to Coastal Vacuum Trucks, Inc., authorizing the transportation of commodities in interstate or foreign commerce, between points in Texas. Austin L. Hatchell, Perry-Brooks Building, Austin, Tex. 78701, attorney for applicants.

No. MC-FC-70002. By order of October 30, 1967, the Transfer Board approved the transfer to Willis Hash and Walter Meadows, Jr., doing business as Jarrell Transfer, Midway, W. Va., of the operating rights in certificate No. MC-91281 issued March 22, 1941, to Charley

Clarence Jarrell, doing business as Jarrell Transfer, Coal City, W. Va., authorizing the transportation of: Household goods, over irregular routes, between points and places in Raleigh, Mercer, and Wyoming Counties, W. Va., on the one hand, and, on the other, points and places in Virginia, North Carolina, and Kentucky. Kermit A. Locke, 100 Heber Street, Beckley, W. Va. 25801, attorney for applicants.

[SEAL]

H. NEIL GARSON,
Secretary.

[P.R. Doc. 67-13476; Filed, Nov. 15, 1967;
8:48 a.m.]

[Notice 51]

MOTOR CARRIER TRANSFER PROCEEDINGS

NOVEMBER 9, 1967.

Synopses of orders entered pursuant to section 212(b) of the Interstate Commerce Act, and rules and regulations prescribed thereunder (49 CFR Part 279), appear below:

As provided in the Commission's special rules of practice any interested person may file a petition seeking reconsideration of the following numbered proceedings within 20 days from the date of publication of this notice. Pursuant to section 17(8) of the Interstate Commerce Act, the filing of such a petition will postpone the effective date of the order in that proceeding pending its disposition. The matters relied upon by petition-

ers must be specified in their petitions with particularity.

No. MC-FC-70049. By order of November 9, 1967, the Transfer Board approved the transfer to B & G Transport, Inc., St. Pauls, N.C., of certificate Nos. MC-15242, MC-15242 (Sub-No. 1), and MC-15242 (Sub-No. 5), issued March 24, 1947, August 21, 1947, and June 3, 1955, respectively, to Thurman Cary Dowless, doing business as T. C. Dowless Transfer, Bladenboro, N.C., and authorizing the transportation of: Peanuts, from Bladenboro, N.C., and points in North Carolina within 15 miles of Bladenboro, to Franklin and Suffolk, Va., and places in North Carolina; tobacco, from Mullins and Lake City, S.C., and points in South Carolina within 25 miles of those points, and Bladenboro, N.C., to Danville, Lynchburg, Richmond, and Norfolk, Va.; agricultural implements from Lynchburg, Va., Charlotte, Hickory, Wilson, and Winston-Salem, N.C., to Bladenboro, N.C., and points in North Carolina within 50 miles of Bladenboro; and various other commodities between specified points in North Carolina, Virginia, Maryland, Pennsylvania, Delaware, New York, New Jersey, the District of Columbia, and South Carolina. W. Osborne Lee, Jr., 208 East Fifth Street, Lumberton, N.C. 28538; attorney for applicants.

[SEAL]

H. NEIL GARSON,
Secretary.

[P.R. Doc. 67-13477; Filed, Nov. 15, 1967;
8:48 a.m.]

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VOLUME 32 • NUMBER 222

Thursday, November 16, 1967 • Washington, D.C.

PART II

Department of Transportation
Federal Highway Administration

Initial Federal Motor Vehicle Safety Standards

New Pneumatic Tires and
Tire Selection and Rims



Title 23—HIGHWAYS AND VEHICLES

Chapter II—Vehicle and Highway Safety

[Docket No. 18]

PART 255—INITIAL FEDERAL MOTOR VEHICLE SAFETY STANDARDS

New Pneumatic Tires and Tire Selection and Rims

A proposal to amend § 255.21 of Part 255, Initial Federal Motor Vehicle Safety Standards, by adding Standard No. 109, New Pneumatic Tires—Passenger Cars; and Standard No. 110, Tire Selection and Rims—Passenger Cars; was published in the FEDERAL REGISTER on July 22, 1967 (32 F.R. 10812).

Interested persons have been afforded an opportunity to participate in the making of the amendment.

Compliance with the labeling requirements of Standard No. 109, established in accordance with section 201 of the National Traffic and Motor Vehicle Safety Act of 1966 (15 U.S.C. 1421), and the tread wear indicator requirements found in the standard may necessitate the modification of tire molds. Several tire manufacturers requested that additional time be allowed to modify these tire molds. After evaluation of all data received, it was determined that an effective date of August 1, 1968, for paragraphs S4.2.1 and S4.3 would provide a reasonable amount of time to accomplish the necessary mold modifications.

Many comments stated that no practical way is known to permanently affix a label onto the tire sidewall, as would have been required by proposed paragraph S4.3.1 until such time as a label is molded into or onto the tire. Accordingly, S4.3.1 of Standard No. 109 has been modified to permit, until August 1, 1968, the use of a label or tag containing the required labeling information not permanently molded into or onto the tire.

Many comments objected to the limitations imposed by the maximum tire section width dimensions specified in the tables of the notice. The Administrator has determined that additional dimensional latitude is necessary, and therefore Standard No. 109 specifies that to provide for tire growth, protective side ribs, ornamentation, manufacturing tolerances, and design differences for each tire size designation actual tire section width and overall tire width may exceed the section width specified in Table I of the Standard by 7 percent.

In response to requests, additional tire size designations and load/inflation schedules were added when necessary information was available. In addition, Table I of Standard No. 109 and Table II of Standard No. 110 have been combined to collate related information.

Persons desiring an amendment to Standard No. 109 adding tires not presently listed, should submit sufficient pertinent information relative to these tires in 10 copies to the Secretary of

Transportation; Attention: Motor Vehicle Safety Performance Service, National Highway Safety Bureau, Federal Highway Administration, U.S. Department of Transportation, Washington, D.C. 20591.

Data received have shown that the rim references indicated in the proposed Standards were inadequate in coverage. Therefore, a more comprehensive list of foreign and domestic trade association publications containing appropriate rim standards or practices has been referenced in the Standards.

Data received demonstrated that the bead unseating and tire strength requirements were inappropriate for certain groups of small tires. Accordingly, tires were regrouped and the test values revised to provide requirements for these small tires that are proportional to the requirements for other sizes of tires.

Although Standard No. 109 applies to tires for use on passenger cars manufactured after 1948, some of the tires covered by the Standard may also be used on earlier model vehicles.

The testing procedures set forth in the Standard, size designations, and related data are based upon existing standards or practices using information furnished by such organizations as the Society of Automotive Engineers, Federal Trade Commission, Tire and Rim Association, European Tire and Rim Technical Organization, Japanese Standards Association, Japan Automobile Tire Manufacturers Association, Rubber Manufacturers Association, Tyre Manufacturers Conference, Ltd., and the Society of Motor Manufacturers and Traders, Ltd.

To permit production of sufficient quantities of tires complying with the requirements of Standard No. 109 after its effective date of January 1, 1968, Standard No. 110 applies to passenger cars manufactured on or after April 1, 1968.

A single table of load/pressure values for radial ply tires was included in the notice and this was supported by many comments. Other comments stressed the importance of including different load/pressure values for optimum tire deflections. Although a single table of load/pressure schedules combining these values for these radial ply tires would be desirable, it was not considered advisable to include such a table in the standard promulgated under the present notice.

In accordance with section 201 of the Act, S4.3 of Standard No. 109 requires that each tire be labeled with the name of the manufacturer or his brand name and an approved code mark to permit the tire seller to identify the tire manufacturer upon the purchaser's request. Any tire manufacturer desiring an approved code mark should apply for his code number assignment to the Secretary of Transportation; Attention: Motor Vehicle Safety Performance Service, National Highway Safety Bureau, Federal Highway Administration, U.S. Department of Transportation, Washington, D.C. 20591.

Several comments, including the suggested use of a "load range" system, will

be considered for future rule making. (See 32 F.R. 14279.)

Since it was clearly the intent of the Congress that, to enhance the safety of the general public, Federal Motor Vehicle Safety Standards for tires become effective as soon as practicable, and since no adverse comments were received pertinent to the proposed effective date presented in the advance notice of proposed rule making (32 F.R. 2417), at a Government-industry technical meeting, and in the notice of proposed rule making (32 F.R. 10812), and no undue burden was demonstrated, good cause is shown that an effective date earlier than 180 days after issuance is in the public interest.

In consideration of the foregoing, § 255.21 of Part 255, Initial Federal Motor Vehicle Safety Standards, is amended by adding the standards set forth below. Standard No. 109 becomes effective January 1, 1968, and Standard No. 110 becomes effective April 1, 1968.

(Secs. 103, 119, National Traffic and Motor Vehicle Safety Act of 1966 (15 U.S.C. 1392, 1407); delegation of authority of Mar. 31, 1967 (32 F.R. 5606), as amended Apr. 6, 1967 (32 F.R. 6495), July 27, 1967 (32 F.R. 11276), Oct. 11, 1967 (32 F.R. 14277), Nov. 8, 1967)

Issued in Washington, D.C., on November 8, 1967.

LOWELL K. BRIDWELL,
Federal Highway Administrator.

MOTOR VEHICLE SAFETY STANDARD NO. 109 NEW PNEUMATIC TIRES—PASSENGER CARS

S1. Purpose and scope. This standard specifies tire dimensions and laboratory test requirements for bead unseating resistance, strength, endurance, and high speed performance; defines tire load ratings; and specifies labeling requirements.

S2. Application. This standard applies to new pneumatic tires for use on passenger cars manufactured after 1948.

S3. Definitions.

"Bead" means that part of the tire made of steel wires, wrapped or reinforced by ply cords, that is shaped to fit the rim.

"Bead separation" means a breakdown of bond between components in the bead area.

"Bias ply tire" means a pneumatic tire in which the ply cords that extend to the beads are laid at alternate angles substantially less than 90° to the centerline of the tread.

"Carcass" means the tire structure, except tread and sidewall rubber.

"Chunking" means the breaking away of pieces of the tread.

"Cord" means the strands forming the plies in the tire.

"Cord separation" means cords parting away from adjacent rubber compounds.

"Groove" means the space between two adjacent tread ribs.

"Load rating" means the maximum load a tire is rated to carry for a given inflation pressure.

"Maximum permissible inflation pressure" means the maximum cold inflation pressure to which a tire may be inflated.

"Maximum load rating" means the load rating at the maximum permissible inflation pressure for that tire.

"Overall width" means the linear distance between the exteriors of the sidewalls of an inflated tire, including elevations due to labeling, decorations, or protective bands or ribs.

"Ply" means a layer of rubber-coated parallel cords.

"Ply separation" means a parting of rubber compound between adjacent plies.

"Pneumatic tire" means a mechanical device made of rubber, chemicals, fabric and steel or other materials, which, when mounted on an automotive wheel, provides the traction and contains the gas or fluid that sustains the load.

"Radial ply tire" means a pneumatic tire in which the ply cords which extend to the beads are laid at substantially 90° to the centerline of the tread.

"Rim" means a metal support for a tire or a tire and tube assembly upon which the tire beads are seated.

"Section width" means the linear distance between the exteriors of the sidewalls of an inflated tire, excluding elevations due to labeling, decoration, or protective bands.

"Sidewall" means that portion of a tire between the tread and the bead.

"Size factor" means the sum of the section width and the outer diameter of a tire determined on the test rim.

"Test rim" means any rim of the applicable rim width specified in Table I for a particular tire size designation with the rim dimensions shown in the 1967 Tire and Rim Association Year Book, the 1967 Tire and Rim Association Supplementary Service Data Book, the Tyre and Wheel Engineering Data Book dated 1965/1966 of the Society of Motor Manufacturers and Traders Limited (SMMT), the Japan Automobile Tire Manufacturers Association, 1966 edition, the Japanese Industrial Standards (JIS-D4203) dated 1966, the European Tire and Rim Technical Organization practices (E.T.R.T.O.), the Deutsche Industrie Norm (DIN) 7818 dated June 1959, or Deutsche Industrie Norm (DIN) 7817 dated August 1962 or an approved equivalent rim.

"Tread" means that portion of a tire that comes into contact with the road.

"Tread rib" means a tread section running circumferentially around a tire.

"Tread separation" means pulling away of the tread from the tire carcass.

S4. Requirements.
S4.1 Size and Construction. Each tire shall be designed to fit each rim specified for its size designation in each reference cited in the definition of "test rim" in S3.

S4.2 Performance Requirements.
S4.2.1 General. Each tire shall conform to each of the following:

(a) It shall meet the requirements specified in S4.2.2 for its tire size designation, type, and maximum permissible inflation pressure.

(b) Its maximum permissible inflation pressure shall be either 32, 36, or 40 p.s.i.

(c) Its load rating shall be that specified in Table I for its size designation,

type, and each appropriate inflation pressure.

(d) If manufactured on or after August 1, 1968, it shall incorporate a tread wear indicator that will provide a visual indication that the tire has worn to a tread depth of $\frac{1}{16}$ inch.

S4.2.2 Test requirements.
S4.2.2.1 Test sample. For each test sample use—

(a) One tire for physical dimensions, resistance to bead unseating, and strength, in sequence;

(b) Another tire for tire endurance; and

(c) A third tire for high speed performance.

S4.2.2.2 Physical Dimensions. Each tire, when measured in accordance with S5.1, shall conform to each of the following:

(a) Its actual section width and overall width shall not exceed by more than 7 percent the section width specified in Table I for its size designation and type; and

(b) Its size factor shall be at least as large as that specified in Table I for its size designation and type.

S4.2.2.3 Tubeless tire resistance to bead unseating. When tested in accordance with S5.2, the applied force required to unseat the tire bead at the point of contact shall not be less than:

(a) 1,500 pounds for tires with a designated section width of less than six (6) inches;

(b) 2,000 pounds for tires with a designated section width of six (6) inches or more but less than eight (8) inches;

(c) 2,500 pounds for tires with a designated section width of eight (8) inches or more, using the section width specified in Table I for the applicable tire size designation and type.

S4.2.2.4 Tire strength. Each tire shall meet the requirements for minimum breaking energy specified in Table II when tested in accordance with S5.3.

S4.2.2.5 Tire endurance. After completion of the laboratory test wheel endurance test specified in S5.4, no tire shall have tread, ply, cord, or bead separation; chunking; or broken cords.

S4.2.2.6 High speed performance. After completion of the laboratory high speed performance test specified in S5.5, no tire shall have tread, ply, cord, or bead separation; chunking; or broken cords.

S4.3 Labeling requirements. Except as provided in S4.3.1, each tire shall be conspicuously labeled on both sidewalls with each of the following permanently molded into or onto the tire:

(a) Size designation.

(b) Maximum permissible inflation pressure.

(c) Maximum load rating.

(d) Identification of manufacturer by—

(1) Name; or

(2) Brand name and an approved code mark.

(e) Composition of the material used in the ply cord.

(f) Actual number of plies in the sidewall and the actual number of plies in the tread area, if different.

(g) The word "tubeless" or "tube type", as applicable.

(h) The word "radial", if a radial ply tire.

(i) An approved recital (or the symbol specified in Figure 1) that the tire conforms to applicable Federal Motor Vehicle Safety Standards.

S4.3.1 Until August 1, 1968, the labeling requirements of S4.3 may be met by affixing to each tire a label or tag that incorporates all specified information not molded into or onto the tire.

S5. Test procedures.

S5.1 Physical Dimensions. Determine tire physical dimensions under uniform ambient conditions as follows:

(a) Mount the tire on a test rim and inflate it to the applicable pressure specified in Table III.

(b) Condition it at ambient room temperature for at least 24 hours.

(c) Readjust pressure to that specified in (a).

(d) Caliper the section width and overall width at six points approximately equally spaced around the tire circumference.

(e) Record the average of these measurements as the section width and overall width, respectively.

(f) Determine tire outer diameter by measuring the maximum circumference of the tire and dividing this dimension by pi (3.14).

S5.2 Tubeless tire bead unseating resistance.

S5.2.1 Preparation of tire-wheel assembly.

S5.2.1.1 Wash the tire, dry it at the beads, and mount it without lubrication or adhesives on a clean, painted test rim.

S5.2.1.2 Inflate it to the applicable pressure specified in Table III at ambient room temperature.

S5.2.1.3 Mount the wheel and tire in the fixture shown in Figure 2, and force the standard block shown in Figure 3 against the tire sidewall as required by the geometry of the fixture.

S5.2.2 Test procedure.

S5.2.2.1 Apply a load through the block to the tire outer sidewall at the distance specified in Figure 2 for the applicable wheel size at a rate of 2 inches per minute, with the load arm substantially parallel to the tire and rim assembly at the time of engagement.

S5.2.2.2 Increase the load until the bead unseats or the applicable value specified in S4.2.2.3 is reached.

S5.2.2.3 Repeat the test at least four places equally spaced around the tire circumference.

S5.3 Tire strength.

S5.3.1 Preparation of tire.

S5.3.1.1 Mount the tire on a test rim and inflate it to the applicable pressure specified in Table III;

S5.3.1.2 Condition it at room temperature for at least 3 hours; and

S5.3.1.3 Readjust its pressure to that specified in S5.3.1.1.

S5.3.2 Test procedure.

S5.3.2.1 Force a $\frac{3}{4}$ -inch diameter cylindrical steel plunger with a hemispherical end perpendicularly into the tread rib as near to the centerline as possible, avoiding penetration into the

tread groove, at the rate of 2 inches per minute.

S5.3.2.2 Record the force and penetration at five test points equally spaced around the circumference of the tire. If the tire fails to break before the plunger is stopped by reaching the rim, record the force and penetration as the rim is reached and use these values in S5.3.2.3.

S5.3.2.3 Compute the breaking energy for each test point by means of the following formula:

$$W = \frac{F \times P}{2}$$

where

W = Energy, inch-pounds;
F = Force, pounds; and
P = Penetration, inches.

S5.3.2.4 Determine the breaking energy value for the tire by computing the average of the five values obtained in accordance with S5.3.2.3.

S5.4 Tire endurance.

S5.4.1 Preparation of tire.

S5.4.1.1 Mount a new tire on a test rim and inflate it to the applicable pressure specified in Table III.

S5.4.1.2 Condition the tire assembly to 100±5° F. for at least three hours.

S5.4.1.3 Readjust tire pressure to that specified in S5.4.1.1 immediately before testing.

S5.4.2 Test procedure.

S5.4.2.1 Mount the tire and wheel assembly on a test axle and press it against a flat-faced steel test wheel 67.23 inches in diameter and at least as wide as the section width of the tire to be tested or an approved equivalent test wheel, with the applicable test load specified in Table I for the tire's size designation, type, and maximum permissible inflation pressure.

S5.4.2.2 During the test, the air surrounding the test area shall be 100±5° F.

S5.4.2.3 Conduct the test at 50 miles per hour in accordance with the following schedule without interruption:

Maximum permissible inflation pressure (p.s.i.)	Load (from table I)--		
	For 4 hours	For 6 hours	For 24 hours
32	24 p.s.i. column.	28 p.s.i. column.	32 p.s.i. column.
36	28 p.s.i. column.	32 p.s.i. column.	36 p.s.i. column.
40	32 p.s.i. column.	36 p.s.i. column.	40 p.s.i. column.

S5.5 High speed performance.

S5.5.1 After preparing the tire in accordance with S5.4.1, mount the tire and wheel assembly in accordance with S5.4.2.1, and press it against the test wheel with the load specified in Table I for the tire's size designation and the applicable pressure specified in Column B of the following table:

A Maximum permissible inflation pressure (p.s.i.)	B Load from Table I
32	24 p.s.i. column.
36	28 p.s.i. column.
40	32 p.s.i. column.

S5.5.2 Break in the tire by running it for 2 hours at 50 m.p.h.

S5.5.3 Allow it to cool to 100±5° F. and readjust the inflation pressure to the applicable pressure specified in Table III.

S5.5.4 Without readjusting inflation pressure, test at 75 m.p.h. for 30 minutes, 80 m.p.h. for 30 minutes, and (except deep-tread, winter-type tires) 85 m.p.h. for 30 minutes.

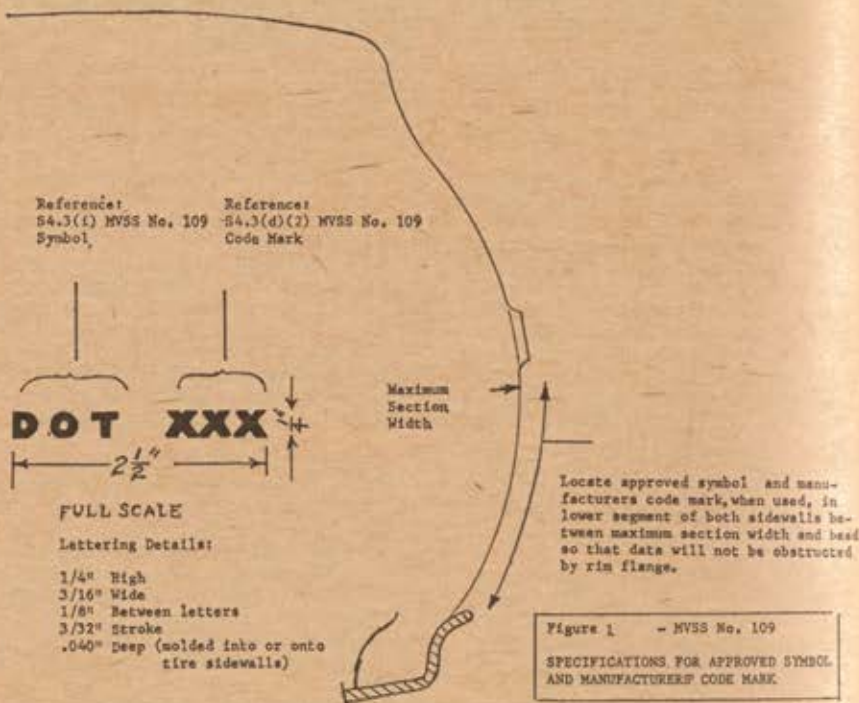


Figure 1 - MVSS No. 109
SPECIFICATIONS FOR APPROVED SYMBOL AND MANUFACTURER'S CODE MARK.

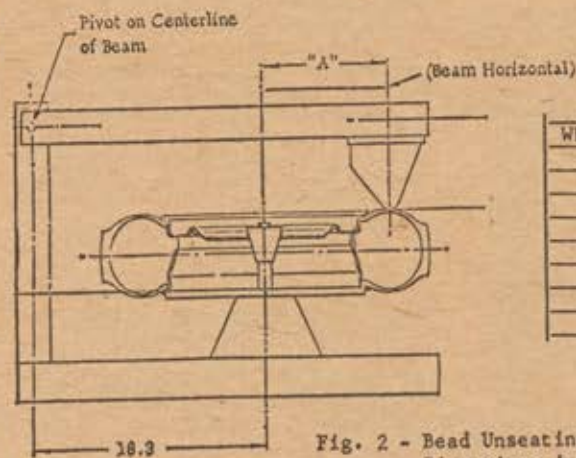
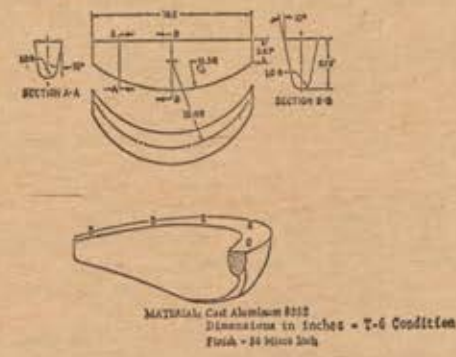


Fig. 2 - Bead Unseating Test Fixture
Dimensions in inches

Wheel Size	Dim "A"
17"	12.0
16"	11.5
15"	11.0
14"	10.5
13"	10.0
12"	9.5
11"	9.0
10"	8.5

Figure 3. Diagram of Bead Unseating Block.



RULES AND REGULATIONS

TABLE I-A

TIRE LOAD RATINGS, TEST RIMS, MINIMUM SIZE FACTORS, AND SECTION WIDTHS FOR CONVENTIONAL AND LOW SECTION HEIGHT BIAS PLY TIRES

Table I-A: Tire load ratings, test rims, minimum size factors, and section widths for conventional and low section height bias ply tires. Columns include tire size designation, maximum tire loads (pounds) at various cold inflation pressures (p.s.i.), test rim width (inches), minimum size factor (inches), and section width (inches).

Actual section width and overall width shall not exceed the specified section width by more than 7 percent.

TABLE I-B

TIRE LOAD RATINGS, TEST RIMS, MINIMUM SIZE FACTORS AND SECTION WIDTHS FOR "70 SERIES" BIAS PLY TIRES

Table I-B: Tire load ratings, test rims, minimum size factors, and section widths for "70 series" bias ply tires. Columns include tire size designation, maximum tire loads (pounds) at various cold inflation pressures (p.s.i.), test rim width (inches), minimum size factor (inches), and section width (inches).

Actual section width and overall width shall not exceed the specified section width by more than 7 percent.

RULES AND REGULATIONS

 TABLE I-C
 TIRE LOAD RATINGS, TEST RIMS, MINIMUM SIZE FACTORS, AND SECTION WIDTHS, FOR DIAS FLY TIRES

Tire size designation	Maximum tire loads (pounds) at various cold inflation pressures (p.s.i.)													Test rim width (inches)	Minimum size factor (inches)	Section width (inches)
	16	18	20	22	24	26	28	30	32	34	36	38	40			
"SUPER BALLOON" SIZES																
5.20-10	350	395	440	485	530	555	575	605	625	650	670	695	715	3½	24.84	3.20
5.90-10	385	430	475	515	550	580	605	630	650	675	700			4	24.90	3.20
5.20-12	395	445	495	545	595	625	655	685	710	735	760	785	810	3½	26.79	3.20
5.90-12	460	520	575	620	670	715	760	795	825	855	885	915	940	4	27.53	3.20
5.20-14	460	505	550	595	640	665	700	730	755	785	810			4	28.00	3.20
5.90-14	505	555	605	655	705	735	775	805	835	865	895			4½	27.00	3.20
5.20-16	430	485	540	590	640	670	710	740	765	795	830	850	875	3½	27.72	3.20
5.90-16	495	560	620	675	725	770	810	850	880	910	945	975	1005	4	28.92	3.20
5.20-18	555	625	695	755	815	860	895	935	970	1,005	1,040	1,075	1,105	4	28.74	3.20
5.90-18	620	705	785	845	915	945	985	1,025	1,060	1,100	1,140	1,175	1,210	4½	28.00	3.20
5.20-20	590	675	755	815	885	925	1,005	1,045	1,085	1,120	1,160	1,200	1,240	4½	31.29	3.20
5.90-20	695	785	865	925	1,005	1,045	1,085	1,125	1,165	1,200	1,240	1,280	1,320	5	32.14	3.20
5.20-22	675	755	835	895	955	1,005	1,045	1,085	1,125	1,165	1,200	1,240	1,280	5	30.00	3.20
5.90-22	795	885	965	1,025	1,105	1,145	1,185	1,225	1,265	1,305	1,345	1,385	1,425	5½	28.89	3.20
5.20-24	695	775	855	915	975	1,025	1,065	1,105	1,145	1,185	1,225	1,265	1,305	5	29.94	3.20
5.90-24	815	905	985	1,045	1,125	1,165	1,205	1,245	1,285	1,325	1,365	1,405	1,445	5½	30.76	3.20
5.20-26	660	745	825	885	945	1,000	1,040	1,080	1,120	1,160	1,200	1,240	1,280	5	32.19	3.20
5.90-26														5½	30.92	3.20
6.45-114														3½	29.75	3.20
5.20-15	505	570	630	685	740	780	830	870	900	935	965	1,000	1,030	3½	29.75	3.20
5.90-15	555	625	695	755	815	860	895	935	970	1,005	1,040	1,075	1,105	4	30.87	3.20
5.90-16	615	685	770	825	890	935	980	1,015	1,050	1,090	1,130	1,165	1,200	4	31.77	3.20
"LOW SECTION" SIZES																
5.00-12	370	420	465	505	540	565	580	605	625	650	670	695	715	3½	25.62	3.04
5.50-12	415	470	520	560	605	635	665	695	720	745	770	800	820	4	26.93	3.04
6.00-12	485	545	605	655	705	735	765	815	845	875	905	935	965	4½	28.33	3.04
5.00-13	410	460	510	545	585	610	635	660	685	710	735	755	780	3½	26.64	3.04
5.50-13	445	495	550	595	640	670	710	740	765	795	820	850	875	4	27.95	3.04
7.25-13	730	825	915	990	1,070	1,110	1,160	1,200	1,245	1,290	1,335	1,380	1,420	5	32.51	3.04
7.50-13	775	875	970	1,040	1,120	1,180	1,225	1,270	1,315	1,365	1,410	1,460	1,500	5½	33.22	3.04
5.50-15L	605	670	730	775	825	860	890	920	950	985	1,020	1,055	1,090	4	29.97	3.04
6.00-15L	665	735	800	850	900	930	970	1,005	1,040	1,080	1,115	1,145	1,175	4½	31.29	3.04
6.50-15L	675	755	840	900	970	1,010	1,060	1,105	1,145	1,185	1,230	1,270	1,305	4½	32.68	3.04
7.00-15L	760	855	950	1,025	1,100	1,145	1,190	1,235	1,280	1,325	1,375	1,420	1,460	5	33.85	3.04
"SUPER LOW SECTION" SIZES																
145-10/5.05-10	380	430	475	515	550	580	605	630	660	675	700	725	745	4	24.76	3.79
125-12/5.35-12	335	380	420	460	485	510	535	550	570	590	610	630	650	3½	24.08	3.79
135-12/5.65-12	370	420	465	505	540	570	590	620	640	665	690	710	730	4	25.53	3.79
145-12/5.95-12	440	495	550	595	640	665	700	730	755	785	810	840	865	4	26.69	3.79
155-12/6.15-12	485	545	605	655	705	735	775	805	835	865	895	925	950	4½	27.95	3.79
135-13/5.65-13	415	470	520	555	595	625	655	685	710	735	760	785	810	4	28.53	3.79
145-13/5.95-13	470	525	585	620	670	705	745	770	800	825	855	885	910	4	27.61	3.79
155-13/6.15-13	515	575	640	700	750	780	820	850	880	910	945	975	1,005	4½	28.44	3.79
165-13/6.45-13	575	645	715	770	825	865	905	935	970	1,005	1,040	1,075	1,105	5	29.52	3.79
175-13/6.95-13	635	715	795	845	915	955	1,005	1,045	1,085	1,120	1,155	1,190	1,225	5½	30.34	3.79
185-13/7.35-13	695	785	870	945	1,010	1,060	1,115	1,160	1,205	1,245	1,290	1,335	1,370	5½	31.41	3.79
145-14/5.95-14	440	495	550	595	640	665	700	730	755	785	810	840	865	4	27.54	3.79
155-14/6.15-14	495	560	620	665	715	750	785	815	845	875	905	935	965	4	28.54	3.79
165-14/6.45-14	540	610	675	730	780	825	860	895	925	960	995	1,030	1,060	4½	29.45	3.79
175-14/6.95-14	595	675	745	805	860	905	945	985	1,025	1,065	1,105	1,145	1,185	5	30.53	3.79
185-14/7.35-14	655	745	815	875	935	980	1,025	1,070	1,115	1,155	1,195	1,235	1,275	5½	31.51	3.79
145-15/5.95-15	460	520	575	610	660	690	720	750	775	805	835	860	885	4	28.53	3.79
155-15/6.15-15	515	585	650	710	760	790	830	860	890	925	955	985	1,015	4	29.54	3.79
165-15/6.45-15	575	655	730	790	845	890	935	980	1,025	1,065	1,105	1,145	1,185	4½	30.45	3.79
175-15/6.95-15	635	725	800	865	925	975	1,025	1,075	1,125	1,175	1,225	1,275	1,325	5	31.42	3.79
185-15/7.35-15	705	795	880	955	1,020	1,070	1,125	1,175	1,225	1,275	1,325	1,375	1,425	5½	32.42	3.79
235-15	1,150	1,295	1,435	1,545	1,660	1,735	1,825	1,895	1,965	2,035	2,110	2,180	2,245	6½	38.26	9.37

* Actual section width and overall width shall not exceed the specified section width by more than 7 percent.

TABLE I-D

TIRE LOAD RATINGS, TEST RIMS, MINIMUM SIZE FACTORS AND SECTION WIDTHS FOR DASH (-) RADIAL TIRES

Tire size designation	Maximum tire loads (pounds) at various cold inflation pressures (p.s.i.)													Test rim width (inches)	Minimum size factor (inches)	Section width ¹ (inches)
	10	18	20	22	24	26	28	30	32	34	36	38	40			
175-12			810	800	920	980	1,040	1,100	1,150	1,200	1,240	1,300	1,350	4½	20.30	6.40
185-12			870	940	1,010	1,080	1,140	1,210	1,270	1,330	1,390	1,450	1,510	5	31.42	7.25
195-12			970	1,040	1,110	1,180	1,250	1,320	1,400	1,450	1,520	1,580	1,640	5½	32.38	7.70
175-14			830	900	960	1,030	1,100	1,160	1,230	1,280	1,350	1,400	1,470	4	31.63	7.09
185-14			920	1,000	1,070	1,140	1,220	1,290	1,360	1,420	1,500	1,560	1,620	5	32.59	7.39
195-14	1,020	1,100	1,180	1,270	1,340	1,420	1,490	1,570	1,650	1,720	1,800	1,880	1,940	5½	34.82	8.80
205-14	1,100	1,180	1,270	1,360	1,450	1,540	1,620	1,700	1,770	1,860	1,940	2,020	2,100	6	35.79	8.60
215-14	1,200	1,300	1,390	1,510	1,580	1,670	1,770	1,850	1,920	2,010	2,100	2,200	2,290	6½	36.44	8.95
225-14	1,320	1,420	1,510	1,610	1,710	1,800	1,900	1,970	2,050	2,150	2,230	2,330	2,420	6½	35.79	8.60
185-15	1,000	1,070	1,140	1,210	1,280	1,350	1,420	1,490	1,540	1,600	1,660	1,720	1,780	5½	33.58	7.45
195-15	1,080	1,160	1,240	1,320	1,400	1,470	1,550	1,620	1,680	1,760	1,820	1,880	1,940	5½	34.22	7.45
205-15	1,190	1,280	1,370	1,450	1,530	1,620	1,700	1,780	1,840	1,920	2,000	2,080	2,160	6	35.20	8.10
215-15	1,280	1,380	1,480	1,570	1,660	1,750	1,840	1,940	2,020	2,100	2,200	2,290	2,380	6	36.00	8.35
225-15	1,370	1,470	1,580	1,670	1,780	1,880	1,980	2,060	2,150	2,240	2,340	2,440	2,540	6½	36.94	8.80
235-15	1,430	1,540	1,640	1,750	1,850	1,960	2,060	2,160	2,250	2,350	2,450	2,550	2,650	6½	37.75	9.05
185-16	495	525	545	565	585	605	625	640	675	675	685	700	710	4	24.76	5.79
195-16	495	430	445	465	480	495	505	525	535	550	560	575	580	3½	24.68	4.90
185-17	480	510	530	550	565	585	600	620	635	650	665	675	685	4	25.53	5.39
195-17	570	605	625	650	675	695	715	740	760	775	790	805	815	4	26.69	5.79
205-17	630	670	695	720	745	770	795	820	840	860	875	890	905	4½	27.36	6.18
215-17	515	545	565	590	610	630	650	670	690	705	715	730	740	4	26.53	5.39
225-17	605	640	665	695	720	740	760	790	815	830	845	855	870	4	27.61	5.79
195-18	670	710	735	765	790	815	840	870	895	910	925	940	955	4½	28.44	6.18
205-18	555	585	610	635	655	675	695	720	740	750	765	780	790	4	27.54	5.39
215-18	645	680	710	735	760	785	810	840	865	885	905	920	935	4	28.54	5.79
225-18	495	525	545	565	585	605	625	640	655	670	685	700	710	3½	27.09	5.00
195-19	585	620	645	670	695	715	735	755	775	795	810	825	840	4	28.53	5.39
205-19	680	720	750	780	805	830	855	875	905	920	940	960	975	4	29.54	5.70
215-19	740	785	815	850	880	905	930	955	980	1,005	1,025	1,045	1,060	4½	30.45	6.18
225-19	925	980	1,020	1,060	1,095	1,130	1,170	1,190	1,230	1,260	1,280	1,305	1,325	4½	32.04	6.62

¹ Actual section width and overall width shall not exceed the specified section width by more than 7 percent.

TABLE I-E

TIRE LOAD RATINGS, TEST RIMS, MINIMUM SIZE FACTORS, AND SECTION WIDTHS FOR TYPE G-77 BIAS PLY TIRES

Tire size designation	Maximum tire loads (pounds) at various cold inflation pressures (p.s.i.)													Test rim width (inches)	Minimum size factor (inches)	Section width ¹ (inches)
	16	18	20	22	24	26	28	30	32	34	36	38	40			
G77-14			1,250	1,310	1,380	1,440	1,500	1,560	1,620	1,680	1,770	1,780	1,830	6	35.04	8.45

¹ Actual section width and overall width shall not exceed the specified section width by more than 7 percent.

TABLE I-F

TIRE LOAD RATINGS, RIMS, MINIMUM SIZE FACTORS, AND SECTION WIDTHS FOR DASH (-) RADIAL TIRES

Tire size designation	Maximum tire loads (pounds) at various cold inflation pressures (p.s.i.)													Test rim width (inches)	Minimum size factor (inches)	Section width ¹ (inches)
	16	18	20	22	24	26	28	30	32	34	36	38	40			
120-10	435	460	485	510	535	560	585	615	635	660	685	710	735	3½	28.84	5.20
130-10	480	495	515	535	555	575	595	615	635	660	670	690	710	3½	28.62	5.04
130-12	515	540	565	590	615	640	665	695	715	740	765	790	815	3½	26.70	5.20
150-12	520	545	570	595	620	650	670	705	725	750	775	800	825	4	26.63	5.59
160-12	600	620	645	665	695	715	740	770	800	825	850	875	905	4	27.83	5.71
180-12	535	555	575	590	615	630	650	670	690	705	725	745	765	3½	26.64	5.04
130-13	575	595	620	645	670	695	720	750	770	795	820	845	870	3½	27.22	5.20
150-13	655	685	710	740	765	795	825	855	880	905	935	960	985	4	27.95	5.59
160-13	675	705	735	760	790	815	845	875	900	925	950	975	1,005	4	28.92	5.71
180-13	705	780	805	830	860	885	915	940	965	990	1,015	1,045	1,070	4	29.37	6.00
140-14	810	840	870	905	940	970	1,005	1,040	1,080	1,100	1,135	1,165	1,200	4½	31.26	6.42
160-14	870	910	950	985	1,025	1,060	1,100	1,145	1,175	1,200	1,230	1,260	1,290	4½	30.75	6.00
175-14	940	980	1,020	1,060	1,100	1,135	1,175	1,215	1,255	1,290	1,325	1,365	1,405	5	31.38	7.10
190-14	605	640	670	700	730	760	795	830	855	885	915	950	980	4	32.51	7.24
210-14	750	785	815	845	875	905	935	970	995	1,025	1,055	1,085	1,115	3½	32.89	5.20
170-15	925	960	1,000	1,040	1,075	1,115	1,155	1,195	1,235	1,270	1,300	1,330	1,360	4	30.76	5.91
190-15	1,065	1,100	1,140	1,180	1,220	1,260	1,300	1,340	1,380	1,415	1,450	1,500	1,540	5	32.88	7.10
210-15	705	780	805	830	860	885	915	940	965	990	1,015	1,045	1,075	3½	34.19	7.65
230-15	885	925	965	1,005	1,040	1,080	1,120	1,160	1,200	1,235	1,275	1,310	1,350	4½	30.87	5.71
250-15	975	1,015	1,055	1,095	1,130	1,170	1,210	1,250	1,290	1,325	1,365	1,405	1,445	4½	33.26	6.42
270-15	1,160	1,200	1,245	1,285	1,325	1,370	1,415	1,465	1,500	1,525	1,575	1,610	1,655	5½	36.00	7.90
290-15	690	775	860	935	1,000	1,045	1,090	1,135	1,175	1,220	1,260	1,305	1,340	4½	32.14	6.60

¹ Actual section width and overall width shall not exceed the specified section width by more than 7 percent.

RULES AND REGULATIONS

TABLE I-G
TIRE LOAD RATINGS, TEST RIMS, MINIMUM SIZE FACTORS AND SECTION WIDTHS FOR "70 SERIES" TYPE "B" RADIAL TIRES

Tire size designation	Maximum tire loads (pounds) at various cold inflation pressures (p.s.i.)													Test rim width (inches)	Minimum size factor (inches)	Section width † (inches)
	16	18	20	22	24	26	28	30	32	34	36	38	40			
DR70-14			1,010	1,070	1,120	1,170	1,220	1,270	1,320	1,360	1,410	1,450	1,490	5 1/2	32.75	7.90
ER70-14			1,070	1,130	1,190	1,240	1,300	1,350	1,400	1,440	1,490	1,540	1,580	5 1/2	33.42	8.10
FR70-14			1,160	1,220	1,280	1,340	1,400	1,450	1,500	1,550	1,610	1,650	1,700	6	34.34	8.33
GR70-14			1,250	1,310	1,380	1,440	1,500	1,560	1,620	1,680	1,730	1,780	1,830	6	35.12	8.53
HR70-14			1,360	1,440	1,510	1,580	1,650	1,710	1,770	1,830	1,890	1,950	2,010	6 1/2	36.21	8.80
JR70-14			1,430	1,500	1,580	1,650	1,720	1,790	1,860	1,920	1,980	2,040	2,100	6 1/2	36.86	9.10
LR70-14			1,520	1,600	1,680	1,750	1,830	1,900	1,970	2,040	2,100	2,170	2,230	6 1/2	37.50	9.30
DR70-15			1,010	1,070	1,120	1,170	1,220	1,270	1,320	1,360	1,410	1,450	1,490	5 1/2	33.91	7.75
ER70-15			1,070	1,130	1,190	1,240	1,300	1,350	1,400	1,440	1,490	1,540	1,580	5 1/2	34.67	7.95
FR70-15			1,160	1,220	1,280	1,340	1,400	1,450	1,500	1,550	1,610	1,650	1,700	6	35.65	8.05
GR70-15			1,250	1,310	1,380	1,440	1,500	1,560	1,620	1,680	1,730	1,780	1,830	6	36.83	8.20
HR70-15			1,360	1,440	1,510	1,580	1,650	1,710	1,770	1,830	1,890	1,950	2,010	6 1/2	37.31	8.40
JR70-15			1,430	1,500	1,580	1,650	1,720	1,790	1,860	1,920	1,980	2,040	2,100	6 1/2	37.62	8.50
KR70-15			1,460	1,540	1,620	1,690	1,770	1,830	1,900	1,970	2,030	2,090	2,150	6 1/2	37.62	8.50
LR70-15			1,520	1,600	1,680	1,750	1,830	1,900	1,970	2,040	2,100	2,170	2,230	6 1/2	38.06	8.65

† Actual section width and overall width shall not exceed the specified section width by more than 7 percent.

TABLE I-H
TIRE LOAD RATINGS, TEST RIMS, MINIMUM SIZE FACTORS, AND SECTION WIDTHS FOR TYPE "B" RADIAL TIRES

Tire size designation	Maximum tire loads (pounds) at various cold inflation pressures (p.s.i.)													Test rim width (inches)	Minimum size factor (inches)	Section width † (inches)
	16	18	20	22	24	26	28	30	32	34	36	38	40			
165R13			770	820	860	904	930	970	1,010	1,040	1,080	1,110	1,140	4 1/2	29.15	6.40
175R13			890	930	980	1,030	1,070	1,110	1,150	1,190	1,230	1,270	1,300	4 1/2	30.30	6.72
185R13			980	1,030	1,080	1,130	1,180	1,230	1,270	1,310	1,360	1,400	1,440	5	31.42	7.25
195R13			1,060	1,110	1,170	1,220	1,280	1,320	1,370	1,420	1,470	1,510	1,550	5 1/2	32.28	7.70
155R14			780	820	860	900	940	970	1,010	1,040	1,080	1,110	1,140	4	29.51	6.05
165R14			860	910	960	1,000	1,040	1,080	1,120	1,160	1,200	1,240	1,270	4 1/2	30.65	6.55
175R14			950	1,000	1,050	1,100	1,140	1,190	1,230	1,270	1,310	1,350	1,390	5	31.63	7.00
185R14			1,040	1,100	1,160	1,210	1,260	1,310	1,360	1,400	1,450	1,490	1,540	5	32.59	7.30
195R14			1,150	1,210	1,270	1,330	1,390	1,440	1,500	1,550	1,600	1,650	1,690	5 1/2	33.09	7.50
205R14			1,250	1,310	1,380	1,440	1,500	1,560	1,620	1,670	1,730	1,780	1,830	6	34.82	8.80
215R14			1,360	1,430	1,510	1,580	1,640	1,710	1,770	1,830	1,890	1,950	2,000	6	35.79	8.60
225R14			1,430	1,510	1,580	1,660	1,730	1,790	1,860	1,920	1,990	2,050	2,100	6 1/2	36.44	8.95
165R15			870	910	960	1,000	1,050	1,090	1,130	1,170	1,200	1,240	1,270	4 1/2	31.15	6.40
175R15			950	1,000	1,050	1,100	1,140	1,190	1,230	1,270	1,320	1,360	1,390	5	32.30	6.90
185R15			1,070	1,130	1,180	1,240	1,290	1,340	1,390	1,440	1,480	1,530	1,570	5 1/2	33.58	7.45
195R15			1,150	1,210	1,270	1,330	1,380	1,440	1,490	1,540	1,590	1,640	1,690	5 1/2	34.22	7.65
205R15			1,240	1,300	1,370	1,430	1,490	1,550	1,610	1,660	1,720	1,770	1,820	6	35.20	8.10
215R15			1,340	1,410	1,480	1,550	1,620	1,680	1,740	1,800	1,860	1,920	1,970	6	36.00	8.35
225R15			1,430	1,510	1,580	1,650	1,720	1,790	1,860	1,920	1,980	2,040	2,100	6 1/2	36.94	8.80
235R15			1,510	1,600	1,680	1,750	1,830	1,900	1,970	2,030	2,100	2,160	2,230	6 1/2	37.75	9.05

† Actual section width and overall width shall not exceed the specified section width by more than 7 percent.

TABLE II-A—MINIMUM BREAKING ENERGY VALUES (INCH-POUNDS)

TABLE II-A—FOR BIAS PLY TIRES WITH SIZE DESIGNATION OF 6.00 (OR 155 MILLIMETERS) AND ABOVE AND 70 SERIES TIRES

Cord material	Maximum permissible inflation pressure		
	32 p.s.i.	36 p.s.i.	40 p.s.i.
Rayon	1,650 in.-lbs.	2,475 in.-lbs.	3,300 in.-lbs.
Nylon or polyester	2,600 in.-lbs.	3,900 in.-lbs.	5,300 in.-lbs.

TABLE II-C—FOR RADIAL PLY TIRES

Size designation	Maximum permissible inflation pressure		
	32 p.s.i.	36 p.s.i.	40 p.s.i.
Below 160 millimeters	1,950 in.-lbs.	2,925 in.-lbs.	3,900 in.-lbs.
160 millimeters or above	2,600 in.-lbs.	3,900 in.-lbs.	5,300 in.-lbs.

TABLE II-B—FOR BIAS PLY TIRES WITH SIZE DESIGNATION BELOW 6.00 INCHES (OR 155 MILLIMETERS)

Cord material	Maximum permissible inflation pressure		
	32 p.s.i.	36 p.s.i.	40 p.s.i.
Rayon	1,000 in.-lbs.	1,575 in.-lbs.	2,000 in.-lbs.
Nylon or polyester	1,500 in.-lbs.	2,250 in.-lbs.	3,000 in.-lbs.

TABLE III

TEST INFLATION PRESSURES

Maximum permissible inflation pressure (in p.s.i.)	32	36	40
Pressure (in p.s.i.) to be used in tests for physical dimensions, bead unseating, tire strength, and tire endurance	24	28	32
Pressure (in p.s.i.) to be used in test or high speed performance	30	34	38

MOTOR VEHICLE SAFETY STANDARD No. 110

TIRE SELECTION AND RIMS—PASSENGER CARS

S1. Purpose and scope. This standard specifies requirements for tire selection to prevent tire overloading.

S2. Application. This standard applies to passenger cars.

S3. Definitions.

"Accessory weight" means the combined weight (in excess of those standard items which may be replaced) of automatic transmission, power steering, power brakes, power windows, power seats, radio, and heater, to the extent that these items are available as factory-installed equipment (whether installed or not).

"Curb weight" means the weight of a motor vehicle with standard equipment including the maximum capacity of fuel, oil, and coolant, and, if so equipped, air conditioning and additional weight optional engine.

"Maximum loaded vehicle weight" means the sum of—

- (a) Curb weight;
- (b) Accessory weight;
- (c) Vehicle capacity weight; and
- (d) Production options weight.

"Normal occupant weight" means 150 pounds times the number of occupants specified in the second column of Table I.

"Occupant distribution" means distribution of occupants in a vehicle as specified in the third column of Table I.

"Production options weight" means the combined weight of those installed regular production options weighing over 5 pounds in excess of those standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim.

"Vehicle capacity weight" means the rated cargo and luggage load plus 150 pounds times the vehicles designated seating capacity.

TABLE I

OCCUPANT LOADING AND DISTRIBUTION FOR VEHICLE NORMAL LOAD FOR VARIOUS DESIGNATED SEATING CAPACITIES

Designated seating capacity, number of occupants	Vehicle normal load, number of occupants	Occupant distribution in a normally loaded vehicle
2 through 4	2	2 in front.
5 through 10	3	2 in front, 1 in second seat.

"Vehicle maximum load on the tire" means that load on an individual tire that is determined by distributing to each axle its share of the maximum loaded vehicle weight and dividing by two.

"Vehicle normal load on the tire" means that load on an individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight (distributed in accordance with Table I) and dividing by two.

S4. Requirements.

S4.1 General. Passenger Cars shall be equipped with tires that meet the requirements of Motor Vehicle Safety Standard No. 109, "New Pneumatic Tires—Passenger Cars."

S4.2 Tire load limits.

S4.2.1 The vehicle maximum load on the tire shall not be greater than the applicable maximum load rating specified in Table I of Motor Vehicle Safety Standard No. 109 for the tire's size designation and type.

S4.2.2 The vehicle normal load on the tire shall not be greater than the test load used in the high speed performance test specified in S5.5 of Motor Vehicle Safety Standard No. 109 for that tire.

S4.3 Placard. A placard, permanently affixed to the glove compartment door or an equally accessible location, shall display the—

- (a) Vehicle capacity weight;
- (b) Designated seating capacity (expressed in terms of total number of oc-

cupants and in terms of occupants for each seat location);

(c) Vehicle manufacturer's recommended cold tire inflation pressure for maximum loaded vehicle weight and, subject to the limitations of S4.3.1, for any other manufacturer-specified vehicle loading condition; and

(d) Vehicle manufacturer's recommended tire size designation.

S4.3.1 No inflation pressure other than the maximum permissible inflation pressure may be specified unless—

(a) It is less than the maximum permissible inflation pressure;

(b) The vehicle loading condition for that pressure is specified; and

(c) The tire load rating from Table I of Motor Vehicle Safety Standard No. 109 for the tire at that pressure is not less than the vehicle load on the tire for that vehicle loading condition.

S4.4 Rims.

S4.4.1 Requirements. Each rim shall:

(a) Be constructed to the dimensions of a rim specified for the applicable tire's size designation in a reference cited in the definition of test rim in S3. of Motor Vehicle Safety Standard No. 109.

(b) In the event of rapid loss of inflation pressure with the vehicle traveling in a straight line at a speed of 60 miles per hour, retain the deflated tire until the vehicle can be stopped with a controlled braking application.

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