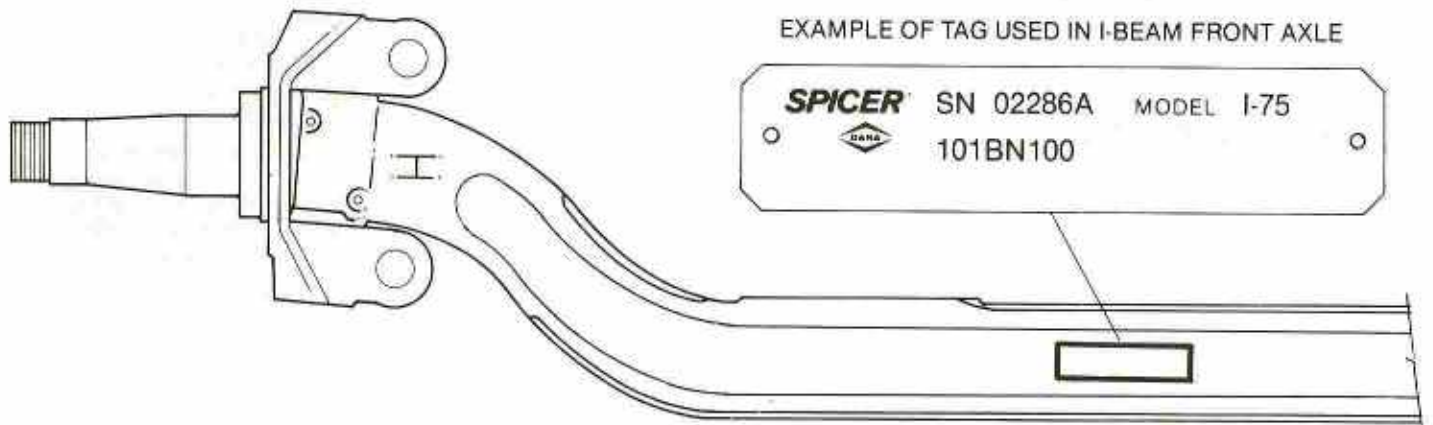


## Axle Identification

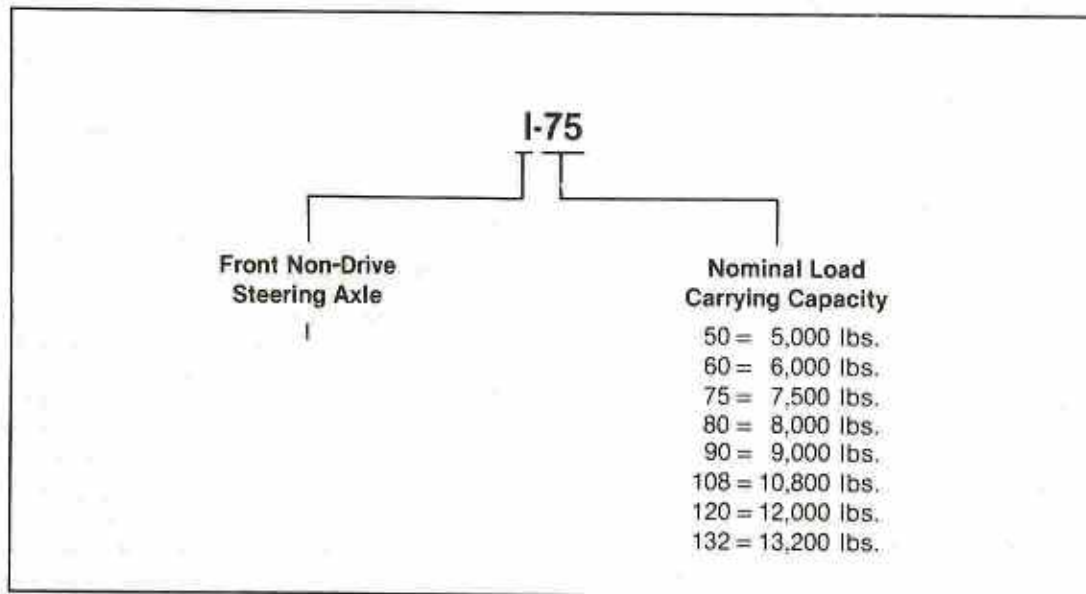


The Spicer front non-drive steering axles are identified with a tag located between the spring pads, on the front side of the center beam section.

The axle tag contains the serial number, the model number, and the assembly number.

## Spicer Heavy Axle Model Numbering System

The Spicer model numbering system provides pertinent information about the axle for easy identification. Example:



# General Precautions for Assembly and Disassembly

## IMPORTANT

**READ THIS SECTION BEFORE STARTING  
THE DETAILED ASSEMBLY OR  
DISASSEMBLY PROCEDURES**

### GENERAL DESCRIPTION

This manual covers maintenance and rebuild procedures for the front non-drive steering axle. Included are the Spicer models I-50, I-60, I-75, and I-80 (medium duty axles), and models I-90, I-108, I-120, and I-132 (heavy duty axles).

The Spicer non-drive steering axle consists of a heat treated forged steel "I-beam" center section with integral spring pads.

The knuckles are machined from heat treated steel forgings with hardened bearing surfaces.

Low friction king pin bushings are used in the knuckle bores.

The Spicer non-drive steering axles may be equipped with either air drum brakes or hydraulic disc brakes.

**With the exception of single draw key and dual draw key method of retaining king pin, the maintenance and rebuild procedures only differ in individual axle specifications.**

**SAFETY GLASSES SHOULD  
BE WORN AT ALL TIMES  
WHEN ASSEMBLING OR  
DISASSEMBLING AXLES.**

### SAFETY PRECAUTIONS

Proper service and repair of vehicle components is important to the safe and reliable operation of all motor vehicles. This applies particularly to steering axles such as the ones described in this service manual. The procedures recommended and described in this service manual are tested, effective methods for performing service operations. Follow each procedure closely, making use of both text and pictures. Some of these service procedures show the use of certain tools designed especially for the operation being performed. It is not mandatory that these tools be used; they are shown only as preferred means of performing the operation. It is not practical to anticipate and advise the service trade of all possible alternate service methods, and of all possible hazardous consequences that could result from any particular method. Accordingly, anyone who uses a service procedure or tool different than shown must first thoroughly satisfy himself that neither his safety nor vehicle safety will be jeopardized by the service method he selects.

### CLEANLINESS

Axle assemblies should be steam cleaned prior to repairs or removal from the vehicle.

Dirt is abrasive and will cause premature wear of otherwise serviceable parts. Service personnel should use a wash tank for thorough cleaning of parts just prior to inspection and reassembly.

### REBUILD FACILITIES

If axle is to be removed from vehicle, a suitable holding fixture or overhaul stand is desirable. Alternately, a sturdy shop table of approximately 30 inches in height can be used with suitable means to hold axle securely for rebuild operations.

### BEARINGS

All bearings should be removed with pullers—designed for this purpose. Loose bearings should be wrapped to keep out dirt. Clean, inspect, and lubricate all bearings prior to reassembly.

**CAUTION: The Spicer Heavy Axle Division of Dana Corporation strictly prohibits the modifying or reconditioning of any front non-driving axle component for any reason. Dana recommends replacing any component which is damaged or out of specification. All of the major components are heat treated and, therefore, cannot be bent, twisted, welded, heated, or reconditioned without experiencing a strength and/or fatigue life reduction.**

Examples of specific prohibited operations are:

- (1.) Hot or cold bending or twisting of I-beam, tie rod assemblies, spindles, steering arms, or tie rod arms for any reason.
- (2.) Welding of, or to, steering arms, tie rod arms, I-beams, steering knuckles, king pins, tie rod assemblies, hubs, drums, or brakes.
- (3.) The re-drilling or re-boring of I-beam king pin holes for a bushing.
- (4.) Milling or machining of any component.
- (5.) Spray welding of bearing diameters or other machined surfaces.
- (6.) The re-drilling or re-boring of draw key holes.
- (7.) Relocation or removal of tie rod clamps.

**NOTE: Various lubricants for lubricating purposes are used on Spicer non-drive steering axles. Before using any of these materials, one should become familiar with and follow all safety precautions as recommended by the product manufacturer/supplier. All personnel involved with these materials should follow good industrial hygiene practices (e.g. Before eating, hands and face should be thoroughly washed. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to these materials.)**

**When discarding any of the materials, observe all local, state, and federal laws and regulations for proper disposal procedures.**

# CAUTION

## ASBESTOS BRAKE LININGS CONTAIN ASBESTOS FIBERS

Breathing asbestos dust may be hazardous to your health and may cause serious respiratory or other bodily harm.

**AVOID CREATING DUST.**

**DO NOT** Remove brake drum without proper protective equipment.

**DO NOT** Work on brake linings without proper protective equipment.

**DO NOT** Replace brake linings without proper protective equipment.

**DO NOT** Attempt to sand, grind, chisel, file, hammer or alter brake linings in any manner without proper protective equipment.

Follow O.S.H.A. standards for proper protective devices to be used when working with asbestos materials.

## Cleaning and Inspection

### CLEANING

Parts should be cleaned with emulsion cleaners or petroleum base cleaning solvent.

**NOTE:** Water and alkaline type solutions may cause damage to machined surfaces and should be avoided.

### DRYING

Use soft, clean, lintless towels or rags to dry components after cleaning. Bearings should **NOT** be dried by spinning with compressed air. This can damage mating surfaces due to lack of lubrication.

After drying, apply a light coat of lubricant or rust inhibitor to all parts to prevent damage from corrosion. If parts are to be stored for a prolonged period, they should be wrapped in wax paper.

### INSPECTION

Prior to reassembly, inspect parts for signs of wear or damage. Replacement of these parts can prevent premature and costly downtime.

### INSPECT FOR:

