1 - INTRODUCTION

To The Driver

This manual provides the necessary operating information for the MCI Model 102 D Series Intercity Coach, and applies to the 102D3,102DL3 and 102DLS3 model coaches. Complete knowledge of this coach and correct operating practices are necessary to obtain the most satisfactory coach performance and to ensure maximum passenger safety and comfort.

This manual contains information on basic and optional equipment and systems and is not intended to instruct operators in basic driving skills. Information for special equipment is in a SPECIALS SUPPLEMENT. This information can be used in normal operation or when emergencies or abnormal conditions occur.

Latest information is indicated by revision bars in the margin to the left of text. The term **(Optional)** in this manual pertains to all equipment and features other than **Basic**.

The specifications and information throughout this manual are up to date at the time of publication, but are subject to change without notice.

NOTE: ***Report any malfunction interfering with satisfactory operation of the coach to the responsible service personnel for immediate attention, especially if safety is affected***.

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This manual is a permanent part of this coach and should stay with the coach if the coach is sold. The manual provides the next owner with important operating, safety and maintenance information. Please contact the MCI Service and/or Warranty Department whenever this coach has been resold, traded or disposed of in any manner.

Certification Plate

The MCI 102D series coach certification plate is mounted on the rear stepwell panel. This plate certifies compliance with all applicable Federal Motor Vehicle Safety Standards in effect on the date of manufacture. This plate also lists the date the coach was built, the GVWR, GAWR's, rim size, tire pressures, coach model and coach serial number (Figure 23).

NOTE:*The specific information shown on the certification plate illustrated refers to the 102DL3 model coach.*

Coach Nameplate

The MCI 102D series coach nameplate is mounted in the engine cooling compartment at the rear of the coach. The vehicle identification (VIN) number, model year and date of manufacture are shown on this plate (Figure 24).

Vehicle Identification Number Explanation

The nameplate in the engine cooling compartment and the certification plate at the rear of the stepwell each contain the seventeen-digit vehicle identification (VIN) number. Information specific to each coach is indicated by the digits or letters in the vehicle identification number. The location numbers shown correspond to the item numbers in the following list (Figure 25).

FIGURE 23 — Coach Certification Plate

1. The first three digits and letters identify the manufacturing company:
   (1M8 = MCI)
2. The fourth digit identifies the coach model:
   P = 102DL3 Intercity
   S = 102D3 Intercity

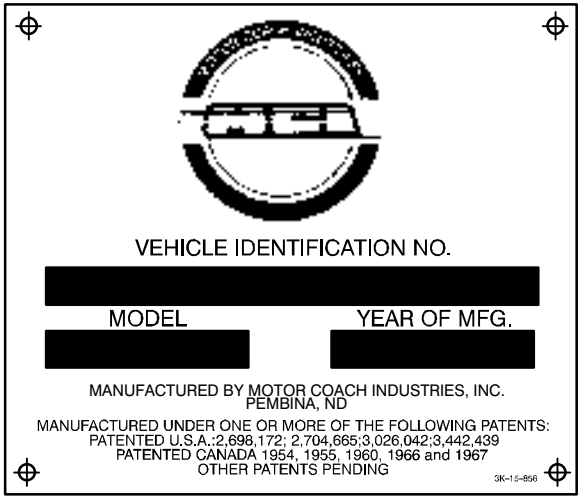

FIGURE 24 — Vehicle Identification Number

3. The fifth digit identifies the series:
   D = MCI
4. The sixth digit identifies the type of coach:
   M = Intercity (MCI)
   P = Multi-Purpose Passenger Vehicle
5. The seventh digit identifies the type of engine:
   P = Detroit Diesel Series 60, DDEC, 425 HP
   R = Detroit Diesel Series 60, DDEC, 400 HP
   S = Cummins Diesel M-11, 400 HP

T = Detroit Diesel Series 60, DDEC, 325/350 HP
V = Caterpillar C-10, 350 HP
W = Caterpillar C-12

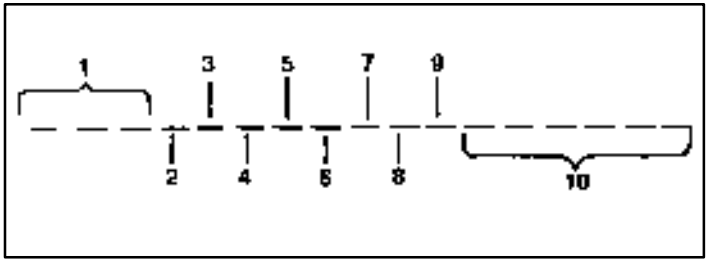

FIGURE 25 — V.I.N. Reference Codes

6. The eighth digit identifies the type of brakes:
   A = Air Brake Intercity
7. The ninth digit is a check number.
8. The tenth digit identifies the year:
   W = 1998
9. The eleventh digit identifies the manufacturing location:
   P = Pembina, North Dakota

13. The twelfth through seventeenth digits define the actual unit number of the coach.

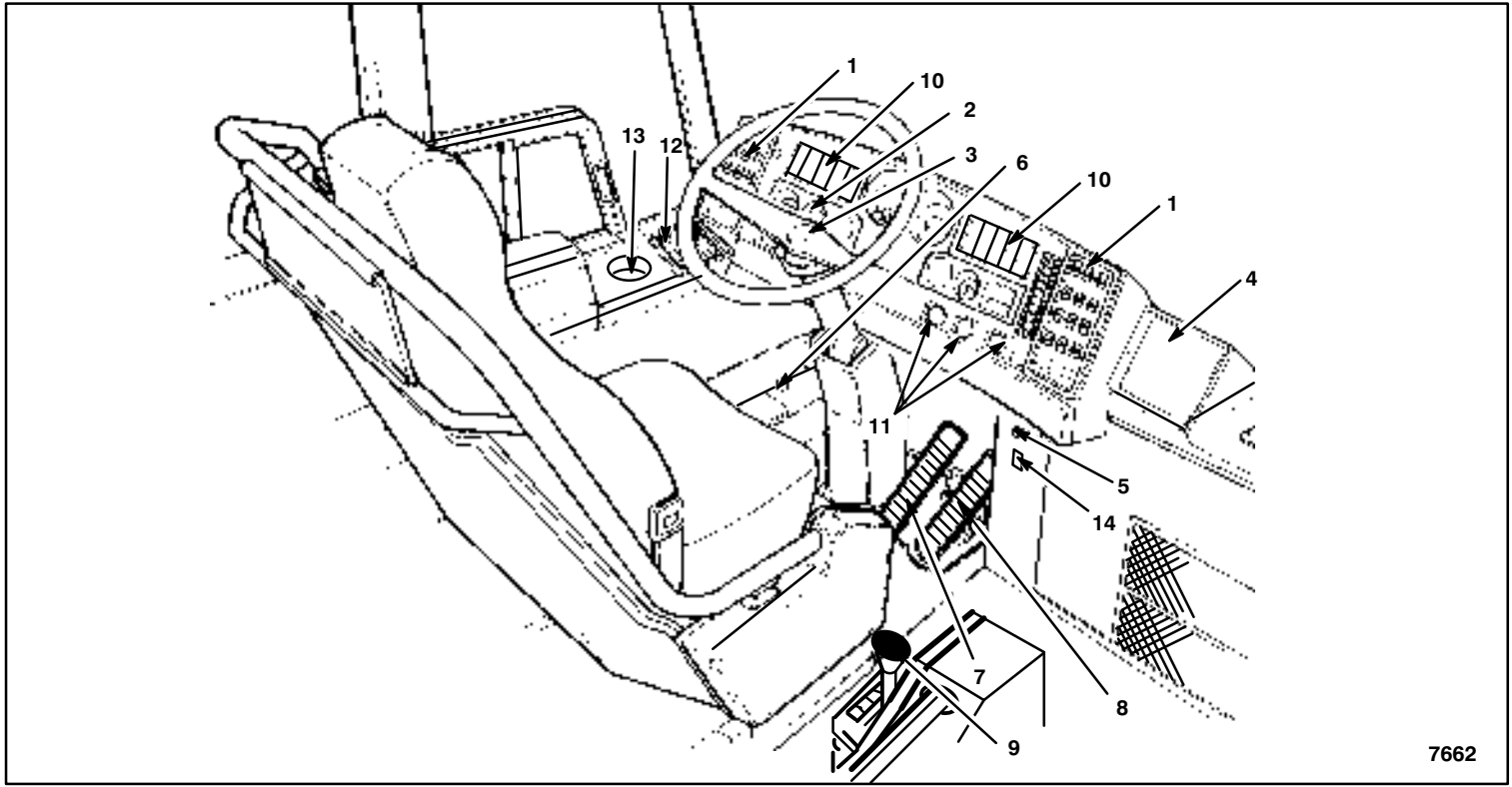

FIGURE 26 - Driver's Controls

Driver Controls

All hand and foot controls used in the normal operation of the coach, and all gauges, telltale lights and switches are located in the driver's compartment (Figure 26). They are arranged to be conveniently reached while in the driver's seat. These, as well as other controls and equipment needed under any abnormal or emergency conditions, are described and illustrated throughout this manual. Information is also included concerning minor service and maintenance procedures with which you should be familiar.

1. LH/RH Upper Switch Panels
2. Instrument Panel
3. Horn Button
4. Entertainment Center
5. Entrance Door Lock Overrule Valve
6. Headlamp Dimmer
7. Brake Pedal
8. Accelerator Pedal
9. Transmission Shift Lever (Automatic)
10. LH/RH Telltale Cluster Assemblies
11. Windshield Wiper & Washer Controls
12. Bulb Test & Illumination panel
13. Driver's Console & Cup Well
14. Baggage Door Air Lock Release

International Symbols

Many of the preceding symbols will be found on various controls and other components of this coach (Figure 27).

Special Features (102D Series)

The 102 D Series coaches incorporate several unique features as basic equipment such as: auto-leveling, trailing axle unloading, front axle kneeling, trailing axle self-steering and rear axle high rise, to name a few. Some brief introductory statements on the proper operation and limitations of these features may help in the safe operation of the coach.

Auto-Leveling

All coaches are fitted with special auto-leveling height control valves at the front and rear drive axle suspension systems. The valves automatically control the inflation and deflation of the air spring bellows to maintain correct coach ride height. These leveling valves are also used in conjunction with other basic or optional features to enhance or modify the vehicle suspension systems.

NOTE: 102DL3 conversion coaches may be equipped with an electrically controlled Hi/Lo leveling system located on the lower LH switch panel.

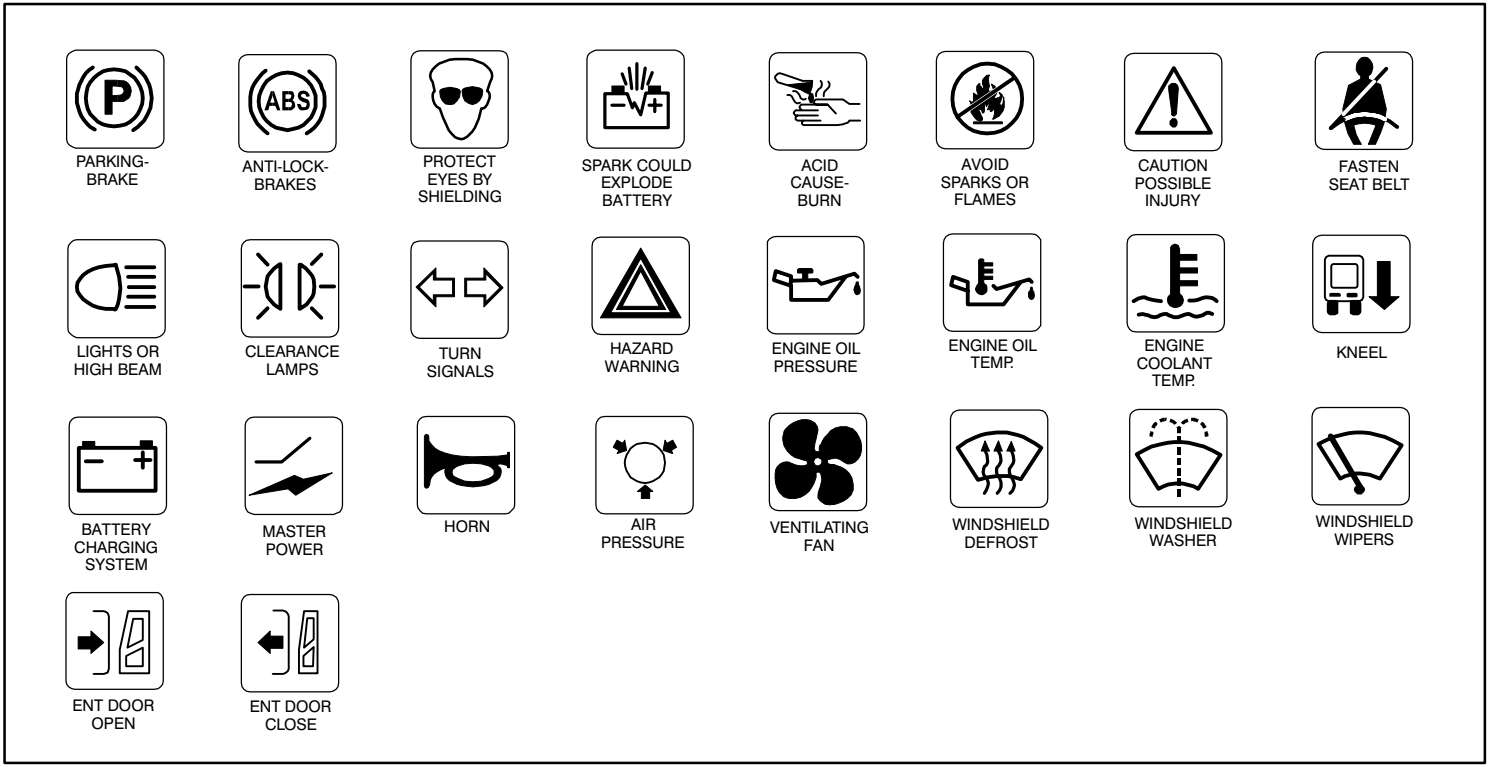

FIGURE 27 – International Operating Symbols

Trailing Axle Unloading

All coaches have the trailing axle unloading feature that allows for either full or partial unloading of the trailing axle. The basic unload function is performed by positioning the manual unloading valves to the exhaust (horizontal) position. When the valves are positioned in this manner air from the suspension bellows is dumped through these valves. When unloaded, trailing axle air springs are sufficiently exhausted to allow the axle to be lifted and secured if necessary.

The electric unloading feature can be used to place approximately 2,000 pounds of additional weight on the drive axle to improve traction during adverse road conditions. When the driver's switch is positioned to unload (lower portion), it partially exhausts the bellows through solenoid valves and an exhaust regulator valve. Repositioning to "TAG AXLE", reinflates the air springs.

The manual or solenoid operated unloading valve systems work in conjunction with the basic leveling valve system. The manual valves are located inside the RH rear side service door, while the electrically operated system is controlled through a switch on the LH switch panel.

NOTE: The manual unloading valves can be used to completely exhaust trailing axle. This unloading feature is protected by a separate low air switch and alarm circuit.

Kneeling Feature

All coaches are equipped with a driver actuated kneeling feature, which allows the coach front suspension to lower 3 to 6 inches from normal ride height to board passengers. The coach should lower when the switch is positioned to "KNEEL" and then released. When this switch is repositioned to "RISE", high pressure supply air reinflates the air springs through a fast recovery circuit and then through the normal ride height leveling system valves. Control switches are located on the RH switch panel and exterior RH switch pocket.

During emergencies the kneeling feature may be bypassed by positioning the manual level control valve to the "EXHAUST" position. This allows normal leveling valve circuit supply air to flow directly to the front air springs, by-passing the exhaust control valve. During extended periods of non-use, the manual isolating ball valves may also be closed by positioning them to their "OFF" (horizontal) position.

⚠ WARNING ⚠

Avoid accessing suspension components from outside coach wheel well areas. Unintentional actuation of the height control valves with fully inflated air springs could result in serious injury. Always block

the coach body adequately during any inspections and/or repairs in these areas.

Self-Steering Feature (102DL3)

The 102DL3 Model coach is equipped with a self-steering trailing axle. The self steering is effective in both forward and reverse travel. At speeds above 20 mph the locking cylinder on tie rod locks, cancelling the self steering and the axle performs as a typical trailing axle. When speed is reduced to below 15 mph, the locking cylinder on the tie rod unlocks, freeing the axle to steer with the direction of the coach.

⚠ WARNING ⚠

Under poor or adverse road conditions, the coach should be driven with the tag axle locked. Manually lock the tag axle with the override switch.

The self-steering feature incorporates two telltale warning lights located in the left-hand warning cluster and identified as “TAG STEERING” and “TAG LOCK”. This feature is also equipped with a warning buzzer and a manual override switch.

The manual override switch is located on the lower left-hand switch panel and labeled “TAG LOCKED”. The switch manually locks the trailing axle in the straight ahead position and illuminates the “TAG LOCK” warning lamp.

If the “TAG LOCK” light remains “ON”, either the axle is unlocked above 20 mph, locked below 15 mph, or the manual override is engaged. A warning buzzer and the “TAG STEERING” telltale light will be activated when the tag steering mechanism is positioned incorrectly or not fully latched in position. If such is the case, the coach should be stopped immediately.

⚠ CAUTION ⚠

Traveling in either direction with the self-castering control mechanism set for an opposing direction will cause the trailing axle steering to fully lock to one side, possibly damaging the suspension and/or tires.

If caster control mechanism is set for forward travel, do not drive or allow the coach to roll backward (inclined areas) without first shifting the transmission into reverse.

In the event of a tag axle malfunction, travel should be suspended until the wheels are locked straight. This is accomplished by placing the override switch to the locked position and straightening the tag axle wheels until the locking pin engages. The

coach can then continue safe travel until service can be performed.

NOTE: Activation of the override switch alone will not deactivate the warning light and buzzer associated with a "TAG STEERING" problem.

Rear Hi-Rise Feature (102DL3)

The rear suspension Hi-Rise feature allows the drive axle air springs to be additionally pressurized to raise the coach approximately 3 inches above normal ride height providing additional rear body clearance. This feature is enabled when the Rise Rear/Lower Rear switch located on the lower LH switch panel is actuated, and automatically controlled through the trailing axle's self-steer speed switch control.

When the switch is positioned to "RISE" the system should automatically raise the rear of coach when speed falls below 15 mph and lower to normal ride height when speed exceeds 20 mph. Repositioning the switch to "LOWER" will disengage feature and return the suspension to normal ride height.

NOTE: ***When coach is in Rise Mode, a red LED at top of lower LH switch panel will illuminate and an audible alarm should sound.***

CAUTION

The trailing axle's override switch will also eliminate speed switch auto control over this Hi-Rise feature. If it becomes necessary to disable the self-steering function by engaging the TAG LOCKED switch, first position the Hi-Rise switch to LOWER and allow coach to attain normal ride height. The tag override switch will keep the coach raised if in high position when actuated.

Always position the switch to lower suspension system to normal ride height before performing any service or inspection procedures on the rear suspension. It is not intended or recommended to continually operate the coach for extended periods with this feature in the high position.

Electronic System Diagnostic Codes

The 102D series coaches are equipped with electronically controlled engines (DDEC IV) or (CELECT) and transmissions (WTEC III). A working knowledge of these codes is necessary in order to emergency troubleshoot these systems if a fault develops.