



FMC Corporation
Motor Coach Operation
1105 Coleman Avenue P.O. Box 1201
San Jose, California 95108

☒ URGENT

☐ ROUTINE

☐ MANDATORY

☐ INFORMATIONAL

Service Bulletin

DATE October 7, 1977

NUMBER 2907-10007

ATTENTION: SERVICE MANAGERS AND OWNERS

GROUP

7

DESCRIPTION

This bulletin provides instructions for replacement of the steering drag link and control tubes. All new tubes have been fabricated from high tensile steel.

SUBJECT

New Steering Drag
Link and Control
Tubes

COMPLIANCE

Service Managers and Owners must comply with this bulletin as soon as possible per recall notification No. A0709. **Do not attempt to deviate from this bulletin.** If a vehicle can not be retrofitted within the guide lines of this bulletin call FMC Service Department 408-289-3665 for instructions.

MODEL (S) AFFECTED

Coaches 00001 to
01050

MANPOWER

Estimated accomplishment time for one mechanic to install new drag link and control tubes, and set front wheel toe-in to proper specifications is 2.0 hours. FMC/MCD will reimburse for labor up to a maximum of 3.0 hours. Any labor charges which exceed \$80.00 must have FMC/MCD approval **BEFORE** proceeding with this bulletin. A signed yellow 'Status Report Card' must accompany your bill before reimbursement can be made.

(Factory Use Only)
Information
added to:

MATERIAL

Replacement parts supplied no charge by FMC/MCD are:

For coaches 00001 to 00645;

- | | | |
|---|------------|--|
| 1 | 5100053-05 | Cross Link Tube (1 1/4 O.D. x 26.70) |
| 2 | 5100053-06 | Control Link Tube (1 1/4 O.D. x 17.15) |
| 1 | 5100053-08 | Drag Link Tube (1 1/4 O.D. x 32.70) |
| 8 | 5107759 | Tube Clamp |

OWNER MANUAL (S)

SERVICE MANUAL (S)

For coaches 00646 to 01050;

- | | | |
|----|------------|--|
| *1 | 5106834-01 | Drag Link Tube (Heavy-Duty Strg Gear , 1 1/4 O.D. x 36.00) |
| | | or |
| *1 | 5106834-04 | Drag Link Tube (Standard Strg Gear , 1 1/4 O.D. x 38.00) |
| 2 | 5106834-02 | Control Link Tube (1 1/4 O.D. x 18.50) |
| 1 | 5106834-03 | Cross Link Tube (1 1/4 O.D. x 24.50) |

PARTS MANUAL (S)

WARRANTY MANUAL (S)

OTHER

*Heavy-duty steering gear has a double housing gear box, while the standard steering gear has a single housing gear box. The heavy duty gear box uses a shorter drag link than the standard.



FMC Corporation
Motor Coach Operation
1105 Coleman Avenue P.O. Box 1201
San Jose, California 95108

☒ URGENT

☐ ROUTINE

☐ MANDATORY

☐ INFORMATIONAL

Service Bulletin

DATE October 7, 1977

NUMBER 2907-10007

ATTENTION: SERVICE MANAGERS AND OWNERS		GROUP 7
Coaches equipped with heavy duty steering gear: 00630, 00654, 00655, 00656, 00658, 00659, 00660, 00663, 00664, 00665, 00666, 00667, 00669, 00680, 00682, 00684, 00686, 00688, 00690, 00692, 00694, and 00696.		SUBJECT
COMMON TOOLS REQUIRED 5/8 socket and box end wrench 11/16 socket and box end wrench 3/4 socket and box end wrench 1/2 breaker bar, ratchet, and extension impact wrench and sockets 12-18 inch pipe wrench steering wheel retaining clamp		MODEL (S) AFFECTED
ACCOMPLISHMENT INSTRUCTIONS (Figure 1) On all coaches check length of new drag link tube with existing drag link tube BEFORE you attempt to remove the old tube. If new tube DOES NOT match the old tube in length, call the FMC/MCD Service Dept 408-289-3665 for further directions. 1. Drive coach onto turntables, start engine, and position front wheels straight ahead. 2. Rotate the steering wheel full left, then full right, and count the number of steering wheel revolutions for each turn. If number of turns left equals number of turns right the steering gear pitman arm is centered. 3. Secure steering wheel with a wheel retainer clamp. 4. Measure distance from coach frame to bellcrank. Bellcrank should be square with frame (Fig 1). Record this measurement. 5. Saturate all tube clamps and tie rod ends with "WD40", "Liquid Wrench", or other suitable penetrating oil. Wait at least 10 minutes. 6. Loosen clamps on cross link and remove cross link tube. Discard old tube. 7. Install new cross link tube, starting each end simultaneously, position clamps so that bolt faces downward, and tighten clamp bolts. NOTE: If coach serial number is 00646 or higher use existing clamps; if coach serial number is between 00001 and 00645 use new clamps (5100759).		(Factory Use Only) Information added to: OWNER MANUAL (S) SERVICE MANUAL (S) PARTS MANUAL (S) WARRANTY MANUAL (S) OTHER



FMC Corporation
Motor Coach Operation
1105 Coleman Avenue P.O. Box 1201
San Jose, California 95108

☒ URGENT

☐ ROUTINE

☐ MANDATORY

☐ INFORMATIONAL

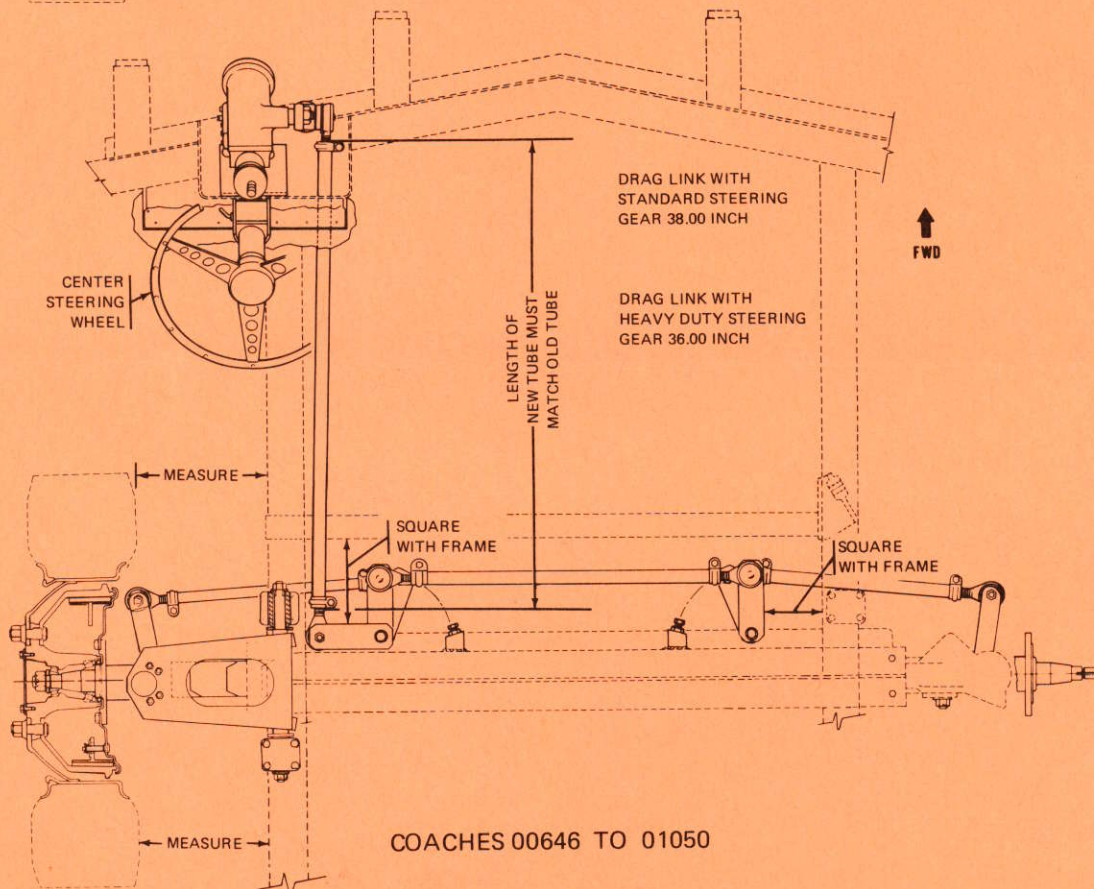
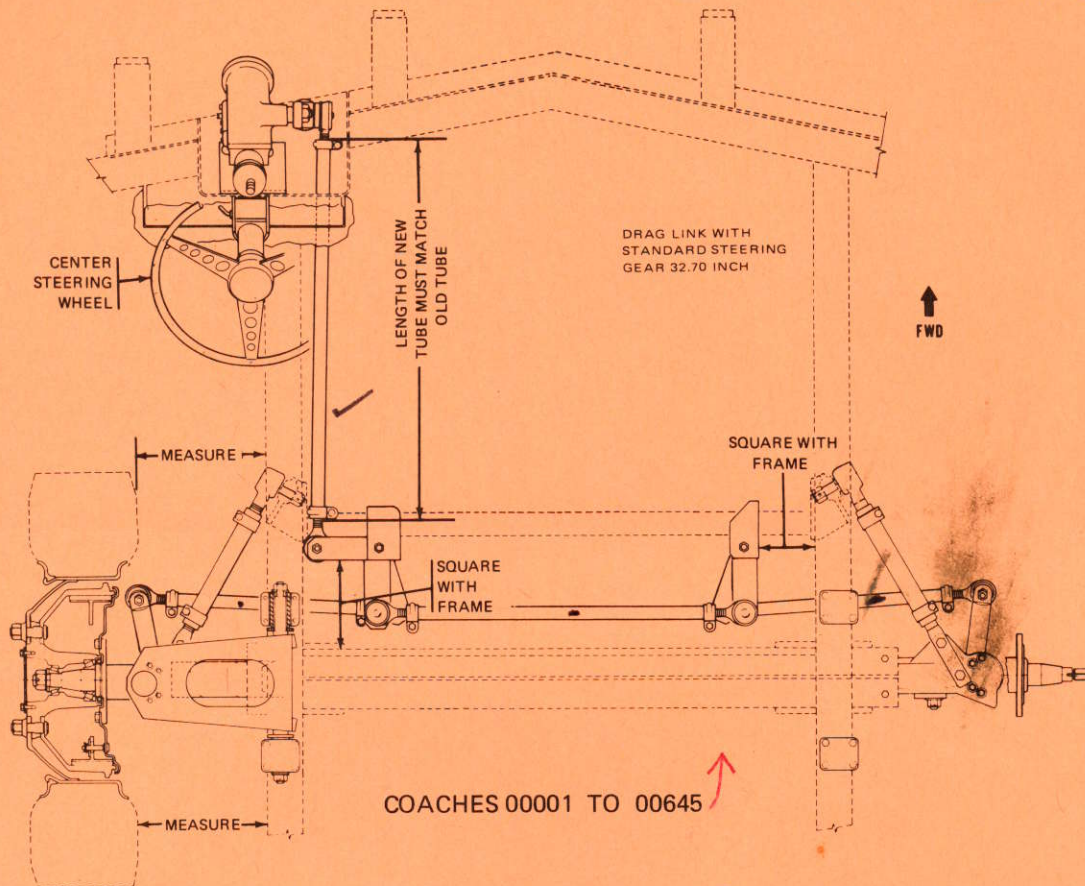


Figure 1. Steering linkage.



FMC Corporation
Motor Coach Operation
1105 Coleman Avenue P.O. Box 1201
San Jose, California 95108

☒ URGENT

☐ ROUTINE

☐ MANDATORY

☐ INFORMATIONAL

Service Bulletin

DATE October 7, 1977

NUMBER 2907-10007

ATTENTION: SERVICE MANAGERS AND OWNERS	GROUP 7
<p>It might be necessary to spread existing clamps before installing on new tube.</p> <p>8. Loosen clamps on control link tube and remove control link tube. Discard old tube.</p> <p>9. Install new control link tube, position clamps so that bolt faces downward, and tighten clamp bolts.</p> <p>10. Repeat steps 8 and 9 for control link on opposite side of vehicle. See note in step 7 regarding new clamps.</p> <p>11. Loosen clamps on drag link tube and remove drag link tube. Discard old tube.</p> <p>12. Install new drag link tube, position clamps so that bolt faces downward, and tighten clamp bolts. See note 7 regarding new clamps.</p> <p>13. With steering wheel centered, check clearance between new drag link tube and hole in frame crossmember. You should have a minimum of 1/8 inch clearance between drag link and hole (Fig 2).</p> <p>If necessary grind out hole to provide clearance, BUT DO NOT grind on mounting surface of steering gear bracket.</p>	SUBJECT
<p>FRONT WHEEL TOE-IN</p> <p>Proper wheel alignment ensures that the steering system will function to provide optimum handling, steering, and stability with minimum tire wear.</p> <p style="text-align: center;">CAUTION</p> <p>A normal road operating load should be on the coach for proper wheel alignment. Domestic and automotive systems serviced, holding tanks empty or low, potable water tanks full, normal kitchenware, supplies, and baggage in place in cabinets and closets. DO NOT JACK COACH DURING ALIGNMENT PROCEDURES. If coach was jacked for maintenance work, drive coach with a normal road operating load at least 25 miles before aligning wheels.</p> <p>To obtain the correct front wheel measurements, turn the control link rods which connect the spindle control arms to the bellcrank and idler arms. Center the steering gear by adjusting the length of the drag link from pitman arm to bellcrank. When properly centered it should require two complete turns of the steering wheel (right or left) to hit the steering stops. Measurement at front of tire and measurement at rear of tire should be the same. See figure 3.</p>	MODEL (S) AFFECTED
	<i>(Factory Use Only)</i> Information added to:
	OWNER MANUAL (S)
	SERVICE MANUAL (S)
	PARTS MANUAL (S)
	WARRANTY MANUAL (S)
	OTHER



FMC Corporation
Motor Coach Operation
1105 Coleman Avenue P.O. Box 1201
San Jose, California 95108

☒ URGENT

☐ ROUTINE

☐ MANDATORY

☐ INFORMATIONAL

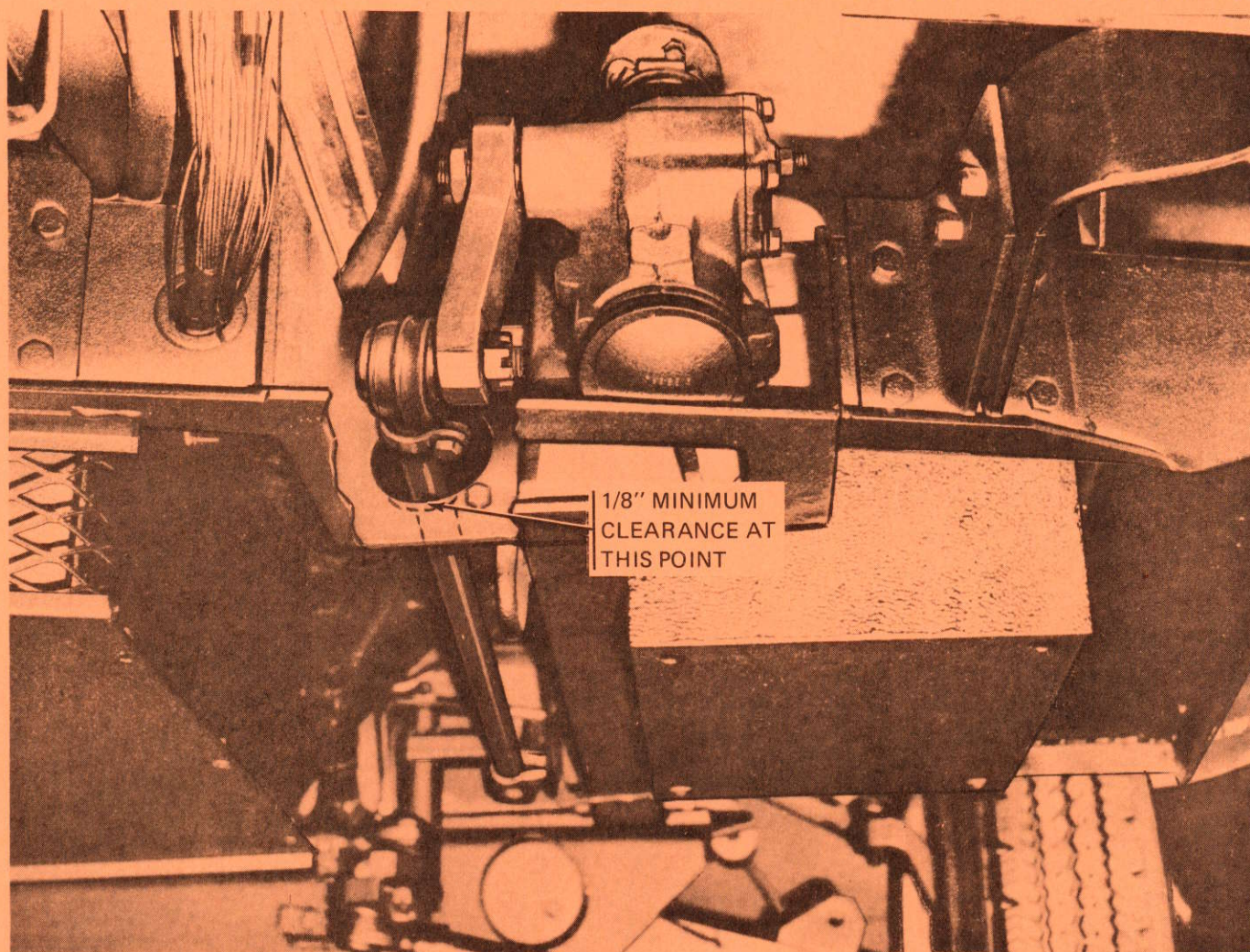
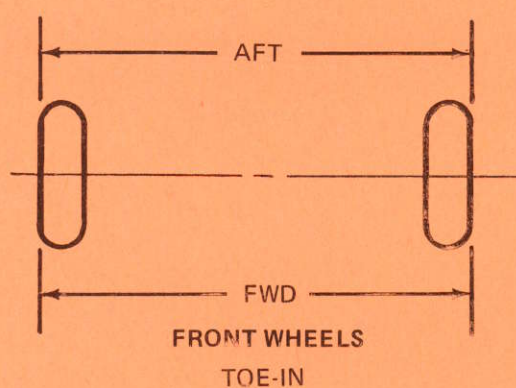


Figure 2. Drag link clearance.



FWD DIMENSION
SHOULD EQUAL AFT
DIMENSION TO
OBTAIN ZERO TOE-IN

Figure 3. Front wheel alignment.



FMC Corporation
Motor Coach Operation
1105 Coleman Avenue P.O. Box 1201
San Jose, California 95108

☒ URGENT

☐ ROUTINE

☐ MANDATORY

☐ INFORMATIONAL

Service Bulletin

DATE October 7, 1977

NUMBER 2907-10007

ATTENTION: SERVICE MANAGERS AND OWNERS	GROUP
INSPECTION	7
<p>With coach fully loaded, have a helper observe all parts of steering linkage for free and unobstructed movement through full left and right turning patterns. Linkage must not bind or come in contact with any water, hydraulic, or vacuum lines that are mounted underneath the coach frame.</p>	SUBJECT
	MODEL (S) AFFECTED
	(Factory Use Only) Information added to:
	OWNER MANUAL (S)
	SERVICE MANUAL (S)
	PARTS MANUAL (S)
	WARRANTY MANUAL (S)
	OTHER