

WCL-2000 SERIES SUSPENSION INSTALLATION DATA.

STEP 1: MOUNTING PREPARATION

PLACE TRUCK ON LEVEL SURFACE BEFORE STARTING. REMOVE EXISTING CROSS-MEMBERS WHICH INTERFERE WITH INSTALLATION AND OPERATION OF NEW SUSPENSION SYSTEM. CHECK DRIVE AXLE ALIGNMENT AND REALIGN IF NECESSARY.

STEP 2: PRELIMINARY MOUNTING

CENTER SUSPENSION UNDER FRAME AT REQUIRED LOCATION. ALLOW OPERATING CLEARANCE TO REAR OF SUSPENSION. DIMENSIONS "A" & "B" WILL DECREASE APPROXIMATELY ONE INCH FROM LIFT TO RUN POSITION.

RAISE SUSPENSION UNTIL LOWER FLANGES OF TRUCK FRAME RAILS CONTACT BOTTOM FLANGES OF SUSPENSION SIDERAILS OR CONTACT SHIMS (6) FOR FULL LENGTH. SHIM DOWN SO TIRE CLEARANCE DOES NOT EXCEED 5.5 INCHES. ADJUST SUSPENSION SO THAT FRONT COLLARS ARE CENTERED IN SLOTTED HANGER HOLE, AXLE SPINDLES ARE IN LINE WITH DRIVE AXLE (DIM. "A" EQUALS DIM. "B", SEE FIGURE 1), AND AT LEAST 15 INCHES DRIVELINE CLEARANCE FROM AXLE IN UP POSITION (PUSHER APPLICATION).

STEP 3: CROSSMEMBER INSTALLATION (STEP 3 NOT NECESSARY IF SUFFICIENT CROSSMEMBERS ARE IN PLACE FROM MANUFACTURER).

CROSSMEMBER LENGTH SHOULD RESULT IN A SNUG FIT AGAINST END PLATES. WELD CROSSMEMBERS TO END PLATES WHILE IN PLACE IN FRAME, FILLET SIZE EQUAL TO MATERIAL THICKNESS.

STEP 4: SUSPENSION CONNECTION

RECHECK SUSPENSION FOR PROPER ALIGNMENT. BE SURE BOTH FLANGES OF SUSPENSION OR SHIMS CONTACT LOWER SURFACE OF TRUCK FRAME FOR FULL LENGTH. DRILL MOUNTING HOLES SIMILAR TO WHAT IS SHOWN. BOLT CROSSMEMBER PLATES AND SUSPENSION SIDERAILS TO FRAME.

STEP 5: REINFORCEMENT INSTALLATION

WELD GUSSETS, PLATES, AND 4 INCH TUBE (10096) IN PLACE. FOLLOW WELDING PROCEDURES RECOMMENDED IN STEP 3.

STEP 6: FINAL SUSPENSION ALIGNMENT

CHECK SUSPENSION ALIGNMENT. IF DIM. "A" DOES NOT EQUAL DIM. "B" MOVE AXLE FORWARD OR UNTIL "A" EQUALS "B". ONCE COMPLETED WELD COLLARS (10005) ALL AROUND WITH .25 INCH FILLET WELD. LOOSENING OF FRONT BOLT NOT NECESSARY FOR ADJUSTMENT.

STEP 7: INSTALLATION COMPLETION

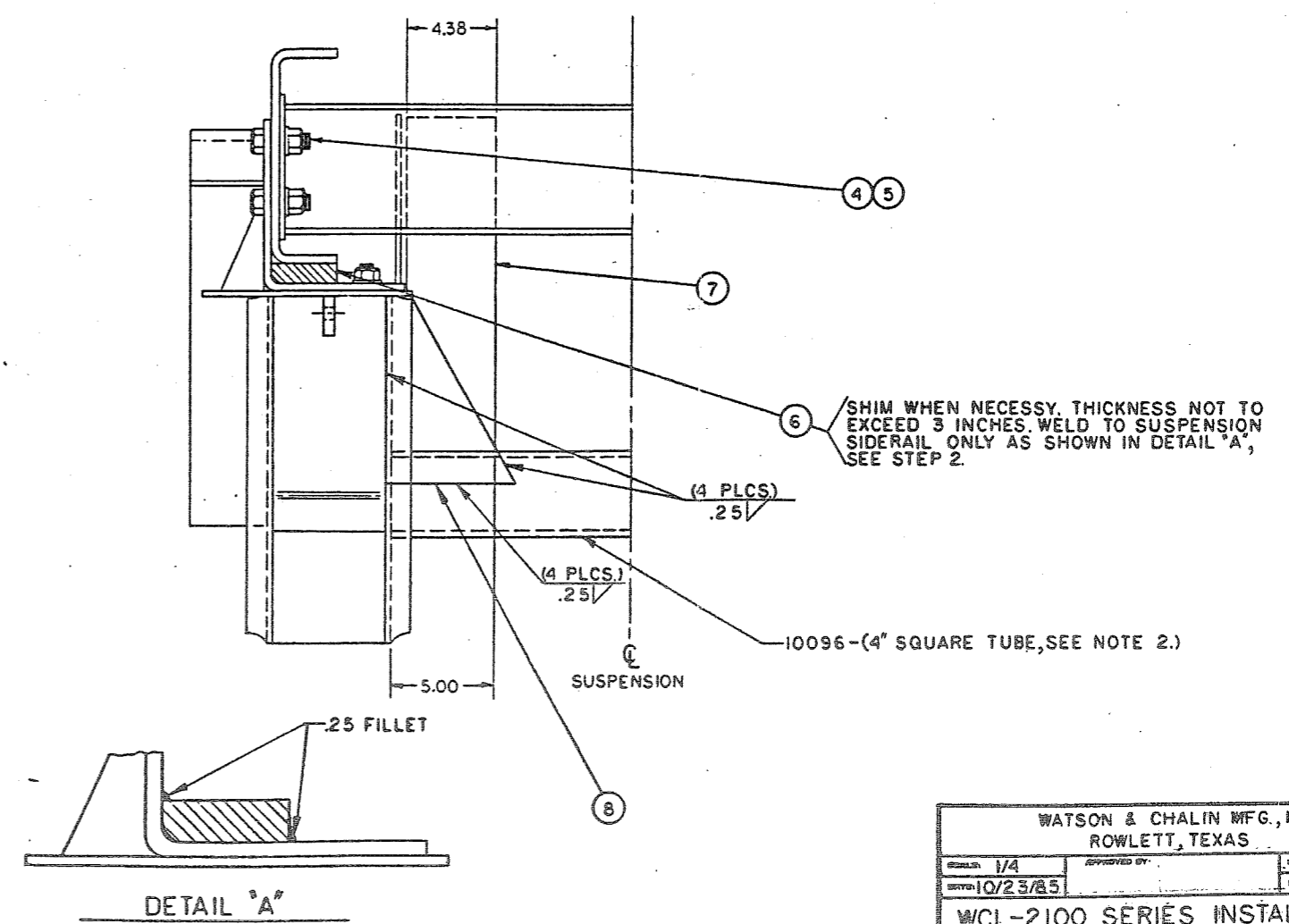
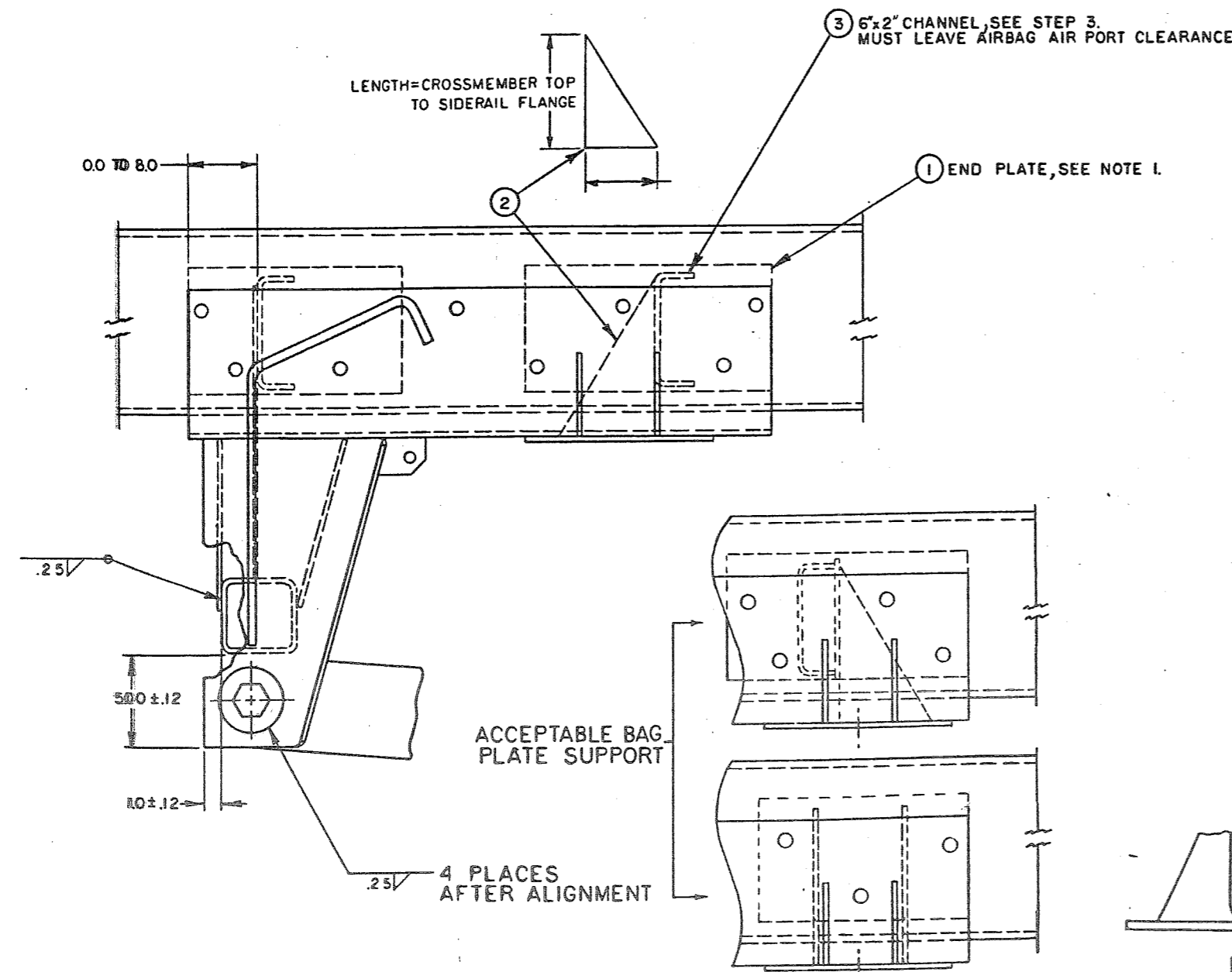
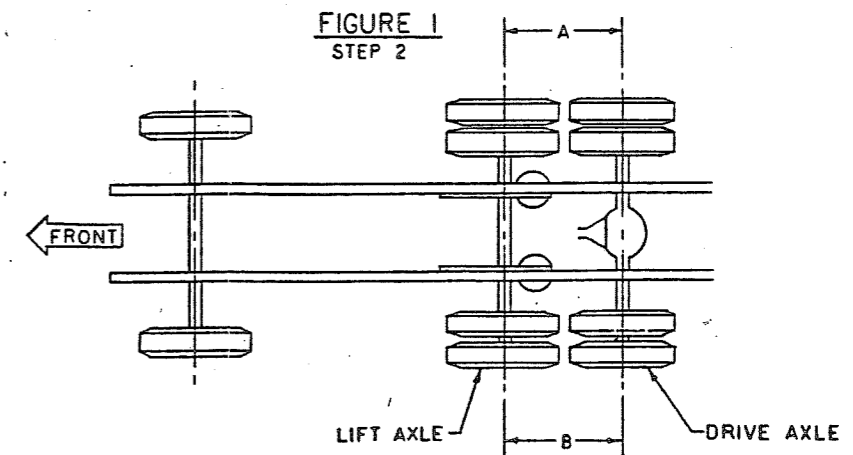
REFER TO DRAWING NUMBERS 10114 & 10115.

NOTES:

1. END PLATE SIZES TO BE .25" THICK AND LARGE ENOUGH TO ACCEPT CROSSMEMBER WELDMENT AND ATTACHMENT BOLTS.
2. 24" TUBE IS PROVIDED, CUT TO GET SNUG FIT.
3. SUBSTITUTE GUSSETS FOR ITEM 2 AND 1 OF ITEM 3 IF PREFERRED.

PARTS TO BE SUPPLIED BY INSTALLER		
ITEM QTY.	DESCRIPTION	
1	4	END PLATE
2	2	GUSSET .25 THICKNESS MIN. STEEL
3	2	6"x2" CHANNEL .25 THICKNESS
4	20	5/6 DIA. MIN. HEX BOLT GRADE 8
5	20	NUT & WASHER FOR ITEM 4
6	2	SHIM (IF NECESSARY)
7	2	RECT. PLATE, .25 TO .38 THICKNESS
8	4	GUSSET .25 THICKNESS MIN. STEEL

CAUTION
OPERATION OF THE SUSPENSION WITHOUT PROPER REINFORCEMENTS MAY DAMAGE SUSPENSION AND WILL VOID ANY WARRANTIES OF EITHER THE VEHICLE MANUFACTURER OR WATSON & CHALIN MANUFACTURING INC.



WATSON & CHALIN MFG., INC. ROWLETT, TEXAS			
SCALE: 1/4	APPROVED BY:	DESIGNED BY: TMB	REVISED:
DATE: 10/23/85	DRAWING NUMBER: WCL-2100 SERIES INSTALLATION		10363
INTERMEDIATE MOUNT			

STEP 9: PNEUMATIC SYSTEM INSTALLATION

INSTALL PNEUMATIC SYSTEM IN ACCORDANCE WITH PLUMBING SCHEMATIC SHOWN AT RIGHT.

PNEUMATIC OPERATION CHECK

- (1) TURN PRESSURE REGULATING KNOB TO "FULL OFF" (DECREASE) POSITION.
- (2) FLIP SWITCH TO "LOAD" POSITION.
- (3) TURN PRESSURE REGULATING KNOB (INCREASE) SLOWLY UNTIL PRESSURE GAGE READS 10 PSI.
- (4) CHECK AIRIDE HEIGHT. AIR PRESSURE MAY BE INCREASED TO RESULT IN AIRIDE HEIGHT OF 21 INCH MAXIMUM (MEASURED AT REAR CENTER SECTION OF AIRIDE).
- (5) CHECK COMPLETE AIR SYSTEM FOR LEAKS.
- (6) OPERATE "LIFT LOAD" SWITCH FOR PROPER SUSPENSION FUNCTION AND CLEARANCE.

CAUTION:

DO NOT INCREASE AIR PRESSURE AS OVERINFLATION OF AIRIDES MAY RESULT IN DAMAGE TO COIL SPRINGS OR AIRIDE.

OPERATION

- (1) REFER TO PNEUMATIC OPERATION CHECK BEFORE APPLYING AIR PRESSURE.
- (2) CHECK VALVE (ITEM 2) PREVENTS REDUCTION OF SYSTEM PRESSURE WHEN THE BRAKES ARE APPLIED.
- (3) BRAKE PROTECTION VALVE (ITEM 1) PROTECTS AIR SUPPLY TO 65 PSI MINIMUM IN THE EVENT OF LINE OR AIRIDE BREAKAGE.
- (4) CONTROL PANEL (ITEM 6) PERMITS ADJUSTMENT TO SUIT LOADING CONDITIONS AND PROVIDES POSITIVE ON-OFF CONTROL.
- (5) QUICK RELEASE VALVE (ITEM 8) PROVIDES RAPID EXHAUST FROM AIRIDE WHEN LIFTING AXLES.

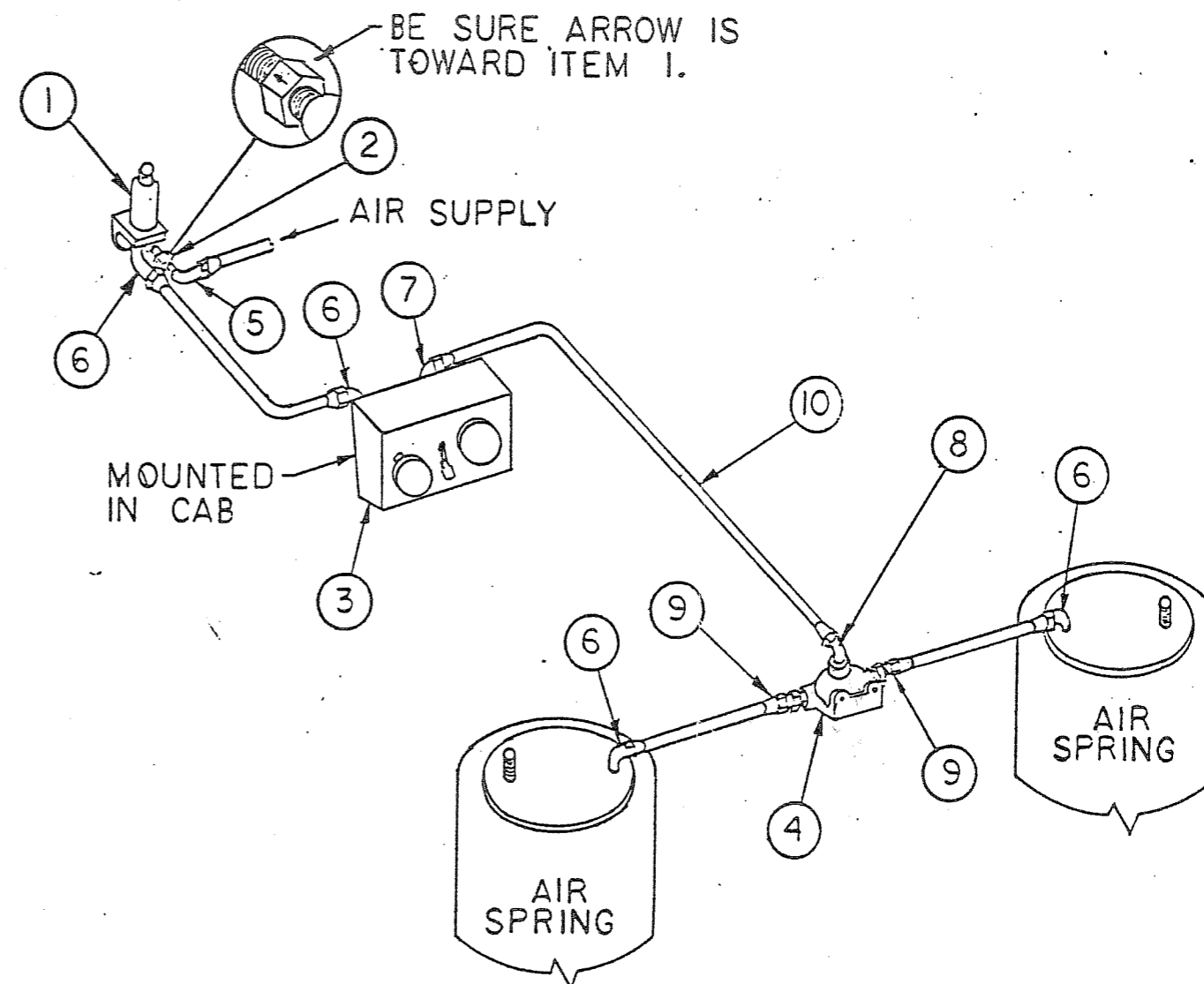
CAUTION:

ALWAYS LIFT AXLE BEFORE RUNNING VEHICLE UNLOADED, COIL SPRING OR AIR SPRING DAMAGE MAY OCCUR OTHERWISE.

NOTE 1: ITEMS SUPPLIED BY INSTALLER

ITEM	QTY	DESCRIPTION
5	1	ELBOW 3/8" LINE X 1/4 FEMALE THREAD
6	4	ELBOW 3/8" LINE X 1/4 MALE THREAD
7	1	ELBOW 3/8" LINE X 1/8 MALE THREAD
8	1	ELBOW 3/8" LINE X 1/2 MALE THREAD
9	2	CONNECTOR 3/8" LINE X 3/8 MALE THREAD
10	-	3/8" O.D. REINFORCED NYLON TUBING

PLUMBING SCHEMATIC



ITEM	PART NO.	D.S.	QTY	DESCRIPTION
1	10100	A	1	BRAKE PROTECTION VALVE
2	10116	A	1	CHECK VALVE
3	10098	A	1	CONTROL PANEL
4	10099	A	1	QUICK RELEASE VALVE

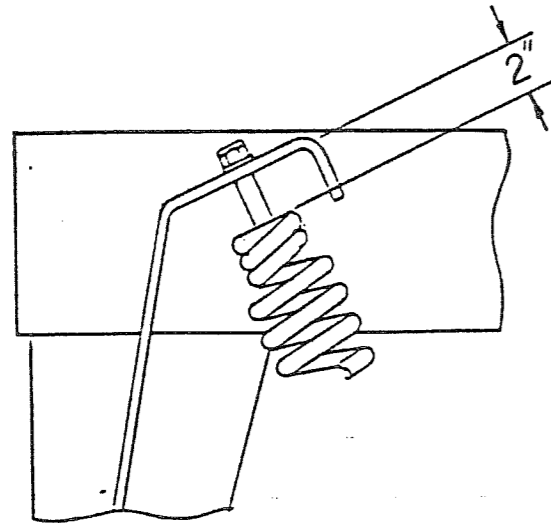
WATSON & CHALIN MFG., INC.
ROWLETT, TEXAS

SCALE: NONE	APPROVED BY:	DRAWN BY TNC
DATE: 2-21-85		REVISED

WCL-2000 SERIES INSTALLATION INSTRUCTIONS

PNEUMATIC SYSTEM INSTALLATION;	DRAWING NUMBER 10115
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SUSPENSION ASSEMBLIES ARE SHIPPED WITH COIL SPRINGS LOOSE. ONCE ALIGNMENT IS COMPLETE, RAISE AXLE UP WITH THE USE OF A JACK OR LIKE TOOL. LUBRICATE SPRING BOLT (10091). TIGHTEN SPRING BY TURNING SPRING BOLT (10091) UNTIL A GAP OF 2.0 INCHES EXISTS BETWEEN SPRING TOP AND UNDER SIDE OF SIDERAIL SPRING ANCHOR AS SHOWN IN THE FIGURE BELOW.



WATSON & CHALIN MFG., INC.

ROVILETT, TEXAS

SCALE: NONE
DATE: 2-21-85

DRAWN BY: INC
REVISED

APPROVED BY:

WCL-2000 SERIES INSTALLATION INSTRUCTIONS

DRAWING NUMBER
10114

STEP 8: BOLT TORQUE CHECK

CHECK ALL BOLTS FOR PROPER TORQUE BEFORE SUSPENSION IS PUT INTO SERVICE. TORQUE SPECIFICATIONS ARE SHOWN IN THE TORQUE CHART BELOW. ONCE PUT INTO SERVICE BOLT TORQUES SHOULD BE CHECKED EVERY 90 DAYS.

TORQUE CHART						
SIZE	3/8	1/2	5/8	3/4	1 1/8	1 1/4
TORQUE IN FOOT. LBS.	15	25	150	200	1000	1000

NOTES:

- (1) PERIODICAL ADJUSTMENT OF COIL SPRING MAY BE REQUIRED AFTER EXTENDED ROAD SERVICE.