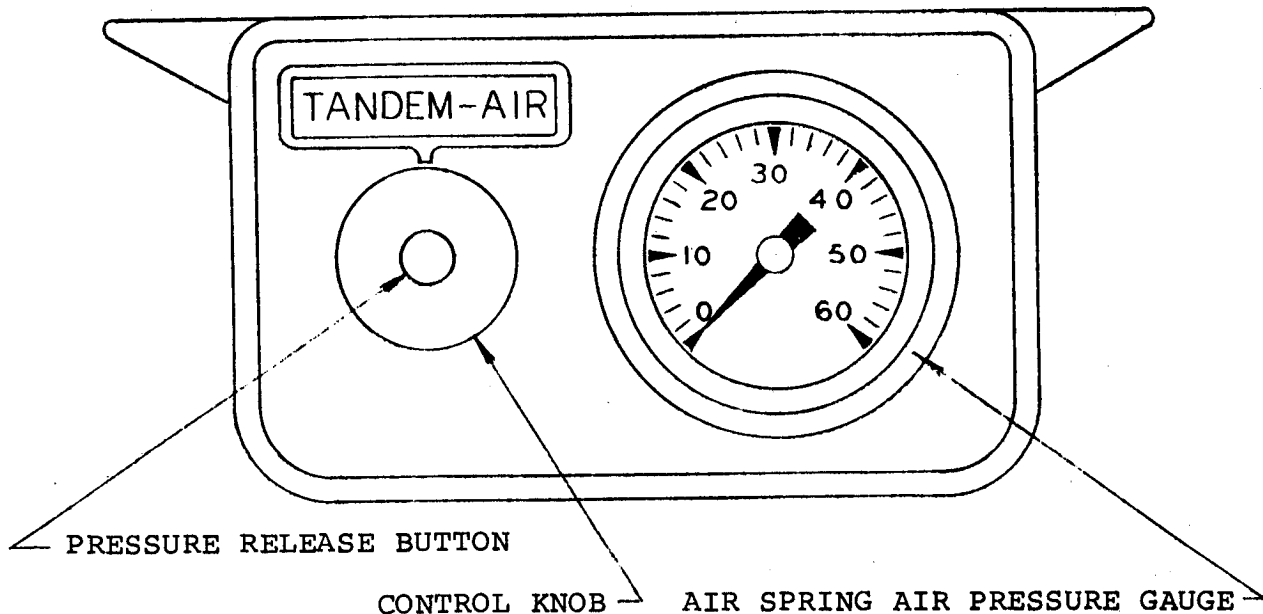


DASH CONTROL PANEL FOR AIR SUSPENSION



The air pressure in the suspension is manually controlled individually by the control panels located on each side of the vehicle.

TO INFLATE AIR SPRING

To inflate air spring, align arrow on the Control Knob with center of name plate and pull. When the desired air pressure is reached push in the Control Knob and turn 90° left or right, this will hold the air pressure.

TO RELEASE PRESSURE

To release pressure on either side, depress the Pressure Release Button on the control panel for that side. In the case of evenly distributed weight, first release pressure from either side, then bleed down the other side as indicated by the Pressure Gauge. In case of unequal load distribution release pressure from the heaviest side first, then release pressure from the lighter side until the vehicle is level.

NEVER OPERATE TANDEM-AIR WITH LESS THAN 3 PSI EACH SIDE.

NEWAY DIVISION

LEAR SIEGLER, INC.

HAMMERBLOW COMPANY - WAUSAU, WISCONSIN

GENERAL OFFICE - MUSKEGON, MICHIGAN

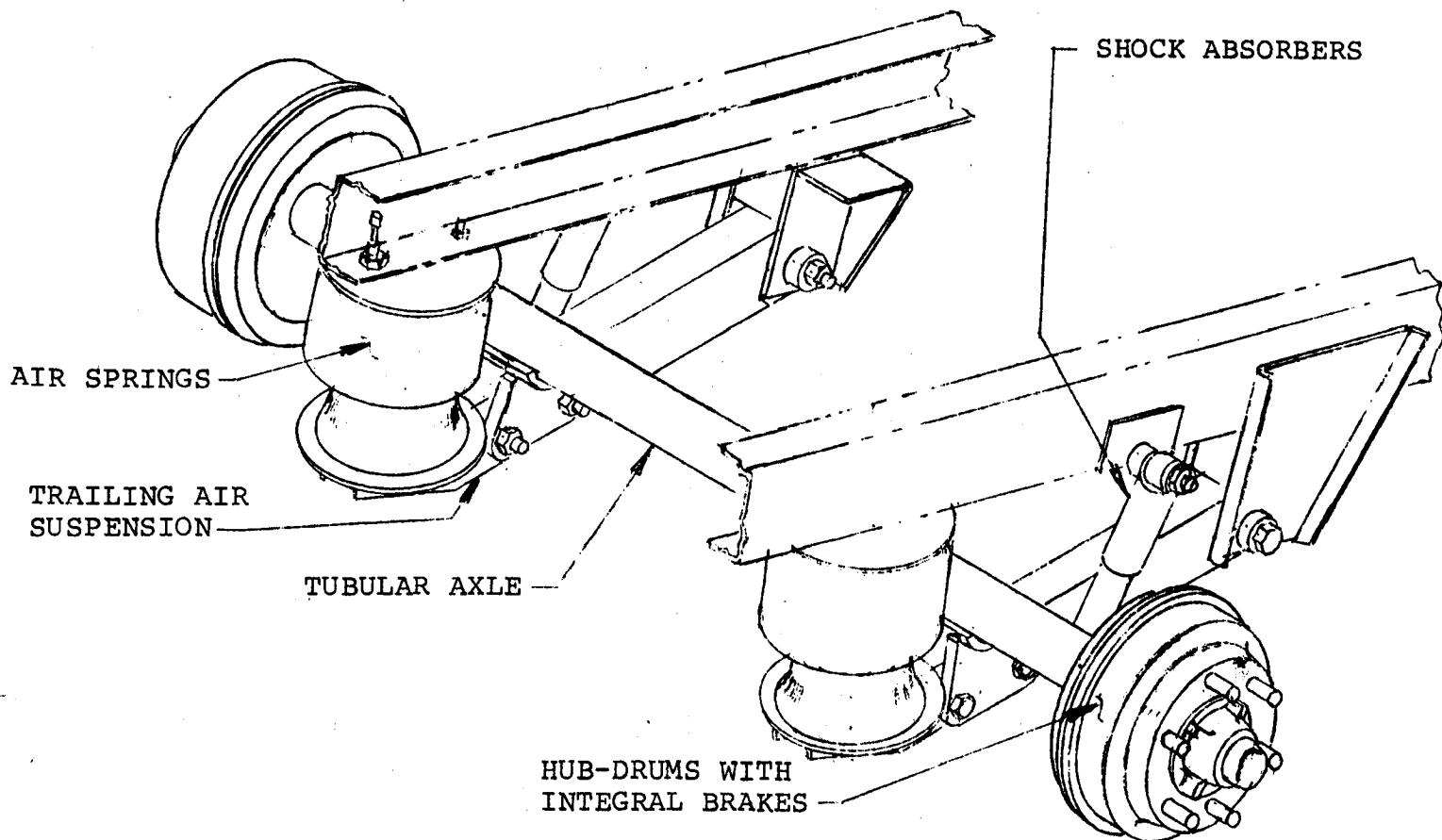
SERVICE & MAINTENANCE MANUAL
FOR

TANDEM AIR 3RD AXLE
SUSPENSION SYSTEM
AND RUNNING GEAR

* TA-3-CA-865

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Tandem-Air is comprised of a rugged tubular axle with advance design hub-drums and integral brakes, all suspended on a true-tracking trailing-arm suspension. It is sprung with durable rubber air-springs and damped with heavy-duty shock absorbers.

Depending on the design employed by the manufacturer of the vehicle, air-spring inflation requirements may vary to meet the requirements of diverse manufacturing designs and load variations. An on board air compressor and dash mounted air controls are standard equipment.

PRE-OPERATIONAL CHECK LIST

Before the vehicle is placed into service, the following items should be inspected:

1. Air pressure in air springs not to exceed 45 P.S.I. or be less than 3 P.S.I.
2. Dimension from axle horizontal centerline to underside of frame should be checked according to vehicle specifications on page 16 (See compressor dash control panel operation page 5)
3. The air springs must have clearance around the rubber air cell.
4. Check suspension system for leaks.
5. Check all nuts and bolts for tightness. (See page 7 for torque specifications.)

5"
3 3/8" clearance
Frame
⊕

OPERATING INSTRUCTIONS

TO INFLATE TANDEM-AIR FOR TRAVEL

With vehicle in a condition of normal load and weight distribution, air springs should be inflated to the required air pressure. See Load Chart (page 6)

Thereafter, whenever conditions of load and weight distribution change, simply adjust inflation of air springs to maintain a level vehicle. This adjustable feature can be used to accommodate uneven weight distribution, or change loading for traction control during on and off road operations.

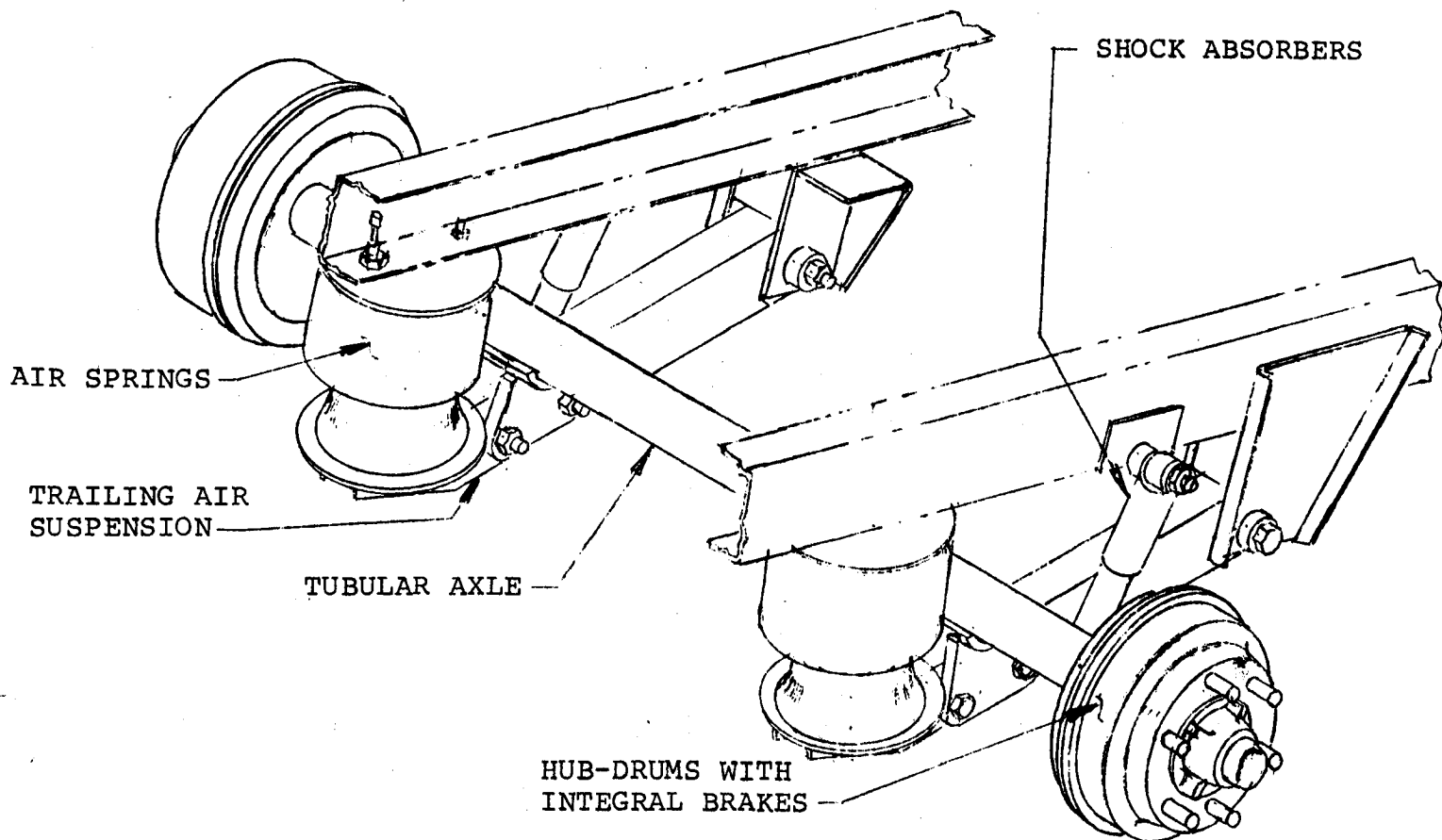
TO INFLATE TANDEM-AIR FOR SITE LEVELING

Through use of the air control panel, tandem-air can be used to "level out" tilted, or uneven campsites as required to bring the vehicle to a comfortable, level condition. Important - return the vehicle back to normal traveling before moving from campsite.

CAUTION - Never run unit with less than 3 PSI. Air pressure not to exceed 20 PSI with single wheels on tandem air suspension.

Air pressure not to exceed 45 PSI with dual wheels on tandem air suspension.

NOTE: Does not apply during campsite leveling.



Tandem-Air is comprised of a rugged tubular axle with advance design hub-drums and integral brakes, all suspended on a true-tracking trailing-arm suspension. It is sprung with durable rubber air-springs and damped with heavy-duty shock absorbers.

Depending on the design employed by the manufacturer of the vehicle, air-spring inflation requirements may vary to meet the requirements of diverse manufacturing designs and load variations. An on board air compressor and dash mounted air controls are standard equipment.

NEWAY DIVISION

LEAR SIEGLER, INC.

HAMMERBLOW COMPANY - WAUSAU, WISCONSIN

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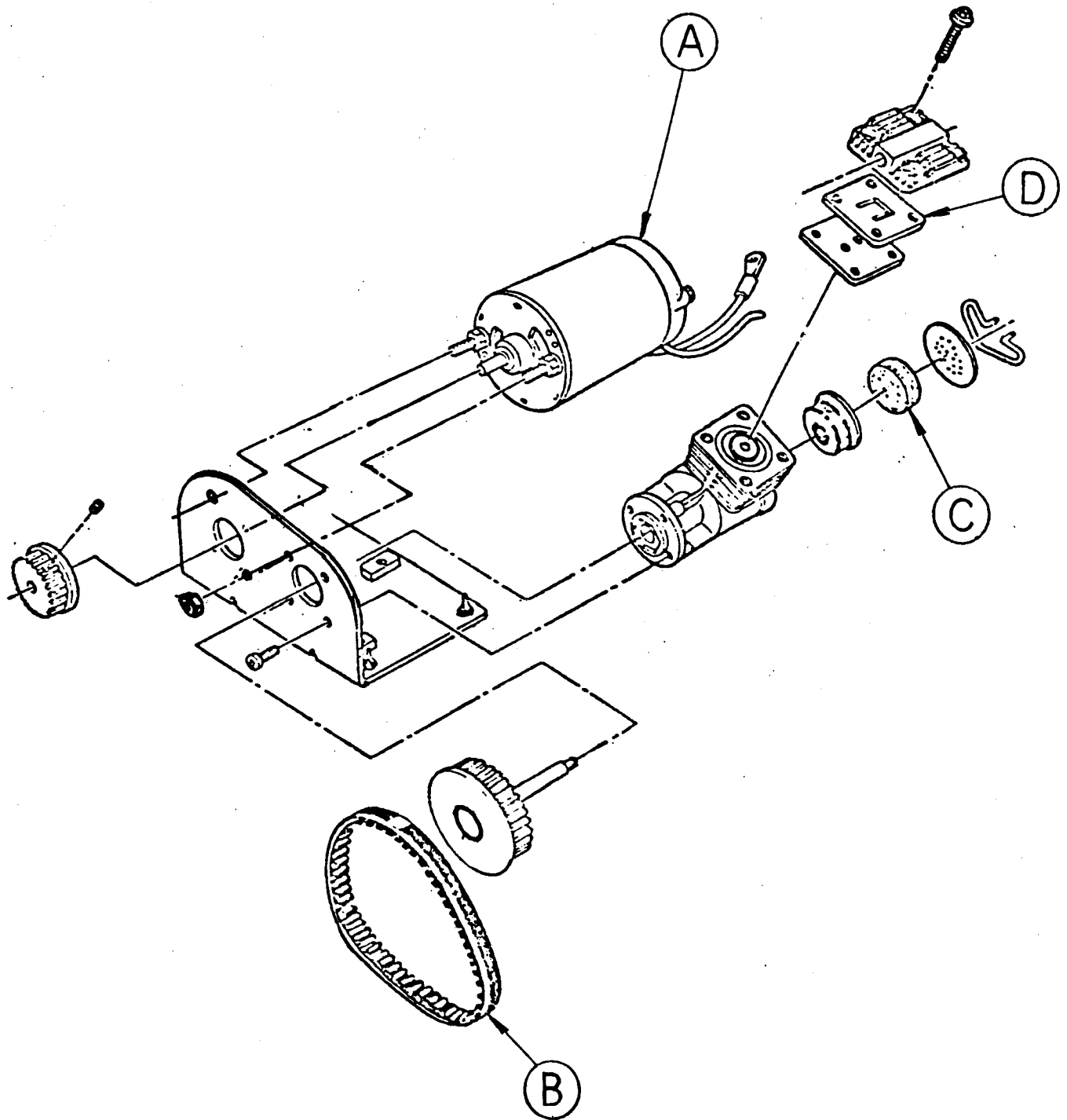
SERVICE & MAINTENANCE MANUAL **FOR**

TANDEM AIR 3RD AXLE
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AIR COMPRESSOR
905 54 067

NEWAY "TANDEM AIR" LOAD CHART

AIR PRESSURE vs. LOAD

<u>LOAD</u>		<u>PRESSURE</u>	
500	Lbs.	3	PSIG
1,000	. . . . .	7	"
1,500	. . . . .	12	"
2,000	. . . . .	16	"
2,500	. . . . .	21	"
3,000	. . . . .	25	"
3,500	. . . . .	30	"
4,000	. . . . .	34	"
4,500	. . . . .	39	"
5,000	. . . . .	43	"
5,200	. . . . .	45	"

SERVICE NOTESTORQUE SPECIFICATIONS
(LUBRICATED THREADS)

<u>Bolt Size</u>	<u>*Recommended Torque</u>
1/2" at Air Spring	20-25 Ft. Lbs.
1/2" Cap Screw at Air Spring	40-50 Ft. Lbs.
5/8" at Shock Absorber	125 Ft. Lbs.
3/4" at Air Spring	20-25 Ft. Lbs.
3/4" at Frame Bracket	270 Ft. Lbs.

(BRASS AIR FITTING CONNECTIONS)

<u>Brass Pipe Fitting - Size</u>	<u>*Recommended Torque</u>
1/8 N.P.T.	4 Ft. Lbs.
1/4 N.P.T.	10 Ft. Lbs.

Note: Use Permatex or sealer at brass pipe fitting connections.

When assembling nut to body of brass compression fittings at plastic tubing connections, tighten as follows: tighten "hand tight". Then tighten with a wrench 1 1/4 turns at all 1/4 tubing fittings. Note: (1) turn equals 360 .

* All torque valves \pm 10%

SERVICE NOTESAIR SPRINGS

The pneumatic suspension system is virtually maintenance-free, however if leakage is suspected, it may be located as follows:

Inflate the system to at least 30 psi as indicated by the pressure gauges, and check all fittings for leaks with a soap and water solution. Dab the solution above the fitting and allow to run down over it. If there is the slightest leak, a bubble will form. Tighten or replace any defective fittings found.

WHEEL BEARINGS

Wheel bearing can best be serviced at any tandem air service center or by an experienced garage mechanic or service station employee. However, for the owner who wishes to service his own, the following procedure should be performed every 10,000 miles, or annually, whichever comes first.

Remove wheels and inspect bearings. Look for any evidence that seals have been allowing grease to escape or water to enter the bearings. Remove both inner and outer bearings from the axle. Inspect the seal surface of the axle to be certain it is smooth and clean. Inspect bearings and races for galling, checking or crystalization. Replace damaged parts. Repack the bearings with a quality brand, fiber-base bearing lubricant by forcing the grease between the rollers, cone and cage. Apply a liberal amount of grease to the outside of cones and inside of cups. Use a new set of inner grease seals when reassembling the wheel. Tighten the adjusting nut with a 12-inch wrench while rotating the wheel both ways until

WHEEL BEARINGS (Cont'd)

there is a slight bind. Then back off the nut between a quarter and a sixth of a turn to the nearest locking hole and insert and bend a new cotter pin in place. Completely fill the grease cup with grease before reinstalling.

BRAKE ADJUSTMENT

The brakes used on Tandem-Air are an automotive type brake, and the method of adjustment is the same:

Jack the vehicle up so the wheel being adjusted is off the ground. Remove the dust plug from its location in the lower inside flange of the brake assembly and insert the blade of a screwdriver or a standard brake adjusting tool to engage the slotted diameter of the brake adjusting screw. Rotate the screw by moving the outer end of the adjusting tool up. Turn the screw while rotating the wheel, until the wheel has a heavy drag, then back off the screw until the wheel turns freely (6 to 8 clicks). Replace the dust plug to keep out dirt and moisture. Repeat the procedure on the opposite wheel. (This procedure should be repeated every 5,000 miles).

SHOCK ABSORBERS

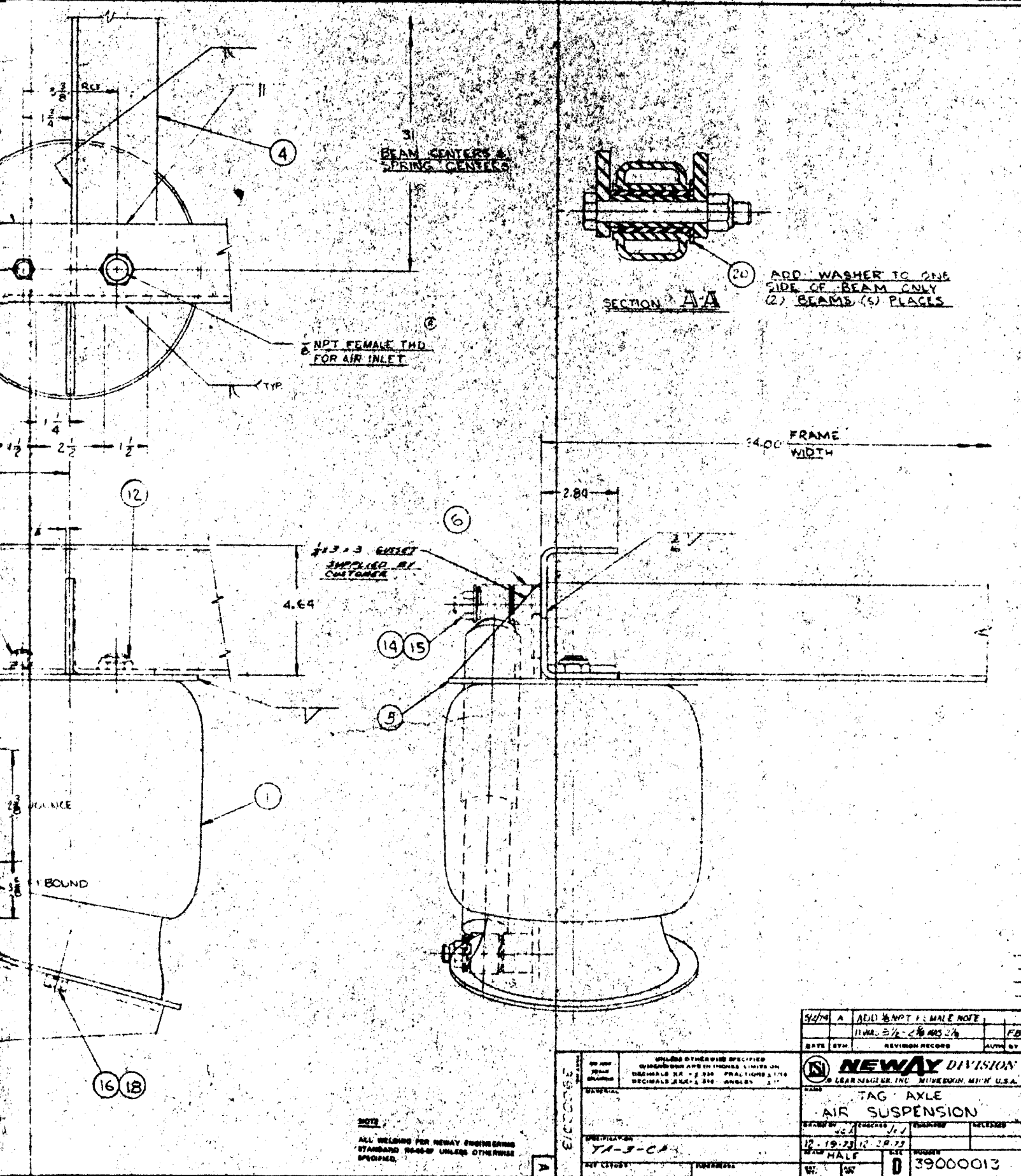
Shock absorbers should be replaced whenever they become ineffective in dampening vertical axle vibration. A special valving arrangement on Tandem-Air operates during the compression stroke to permit the vehicle to ride on the spring and not on the shock absorber. This gives a better ride and longer shock absorber life.

SECTION V - TROUBLESHOOTING

<u>PROBLEM</u>	<u>POSSIBLE CAUSES</u>	<u>POSSIBLE REMEDY</u>	<u>SEE PAGE</u>
<u>SUSPENSION</u>			
Failure to hold inflated pressure	Leakage in air Suspension system	Check for leaks as directed, tighten fittings, replace if necessary	8
Clatter or rattle	Worn shock absorbers	Inspect. Replace if required.	16
	Worn bushings	Inspect. Replace if required.	16
	Wheels out of balance	Balance wheels	
	Loose wheel bearings	Adjust bearings Replace if required.	8
Off-level stance	Improper spring inflation.	Adjust inflation pressures.	
<u>BRAKES</u>			
Grabby or locking	Grease on lining	Replace seals & linings	17
	Loose parts or foreign material in brake drums	Check brakes internally for loose rivets, broken springs, pebbles, sand.	
	Internal rust	Normal continued use will remedy.	
Noisey	Poor bearing adjustment	Adjust bearings. Replace if required.	8
	Lining worn to rivets	Install new linings.	
Weak or in-operative	Improper adjustment	Adjust	9
	Grease on lining	Replace seals and linings	
	Low hydraulic fluid level	Fill per vehicle owner's manual	
	Brakes overheated	Allow to cool	

SECTION V - TROUBLESHOOTING

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NEWAY DIVISION
MUSKEGON, MICHIGAN, U.S.A.

PARTS LIST

NAME TANDEM AIR AXLE ASSEMBLY

MODEL NO.

DRAWING NO. 390 00 031

SHEET 1 OF 1

PARTS LIST # 391 06 028

SPRING CENTERS _____ 31

BEAM CENTERS_____3.1

AXLE SIZE 3 1/4 Dia.

AXLE TYPE TAG AXLE

CAPACITY 5200# G.A.W.R. W/DUAL

WHEELS

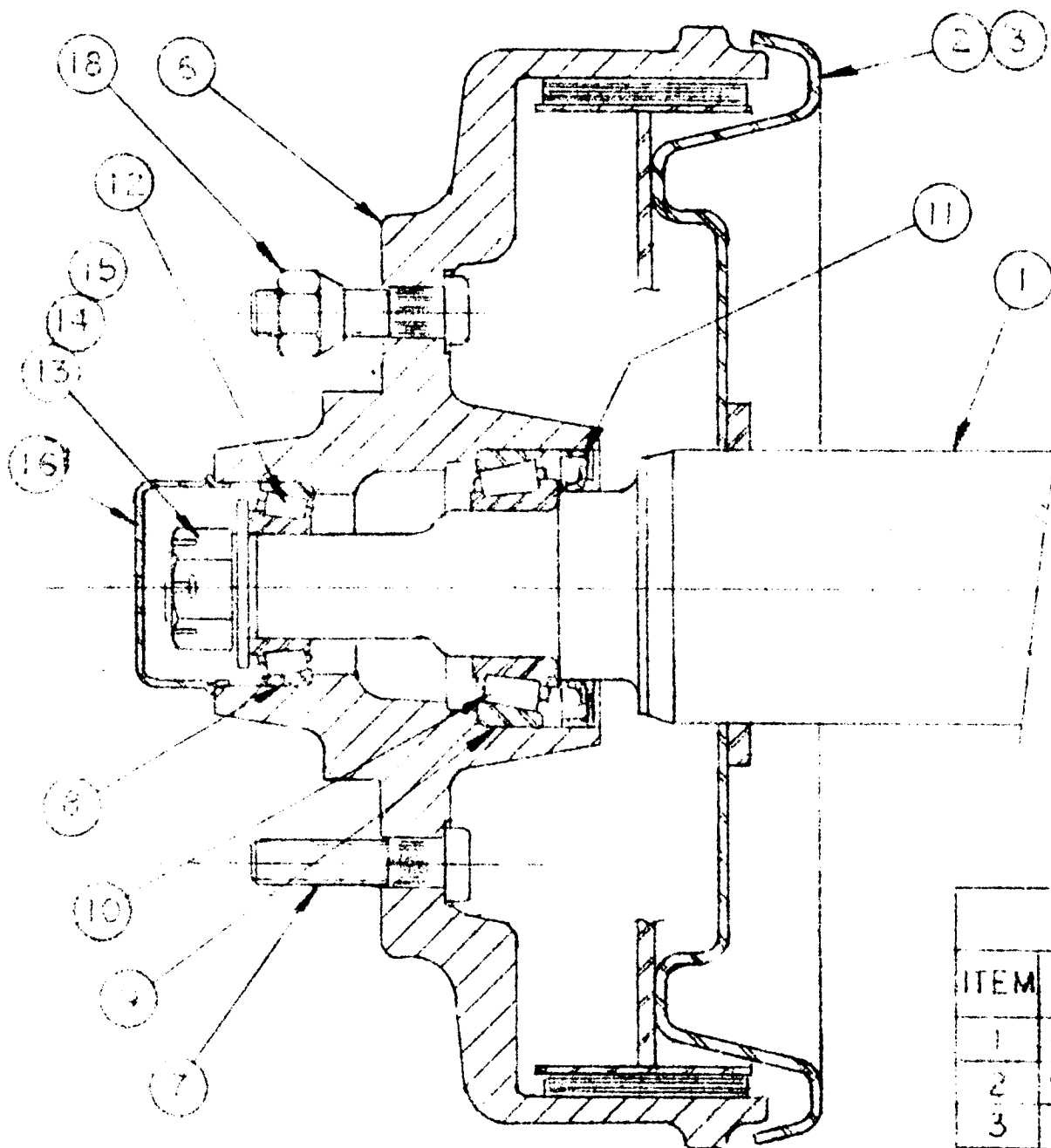
63.24 Track W/Duals

DATE _____

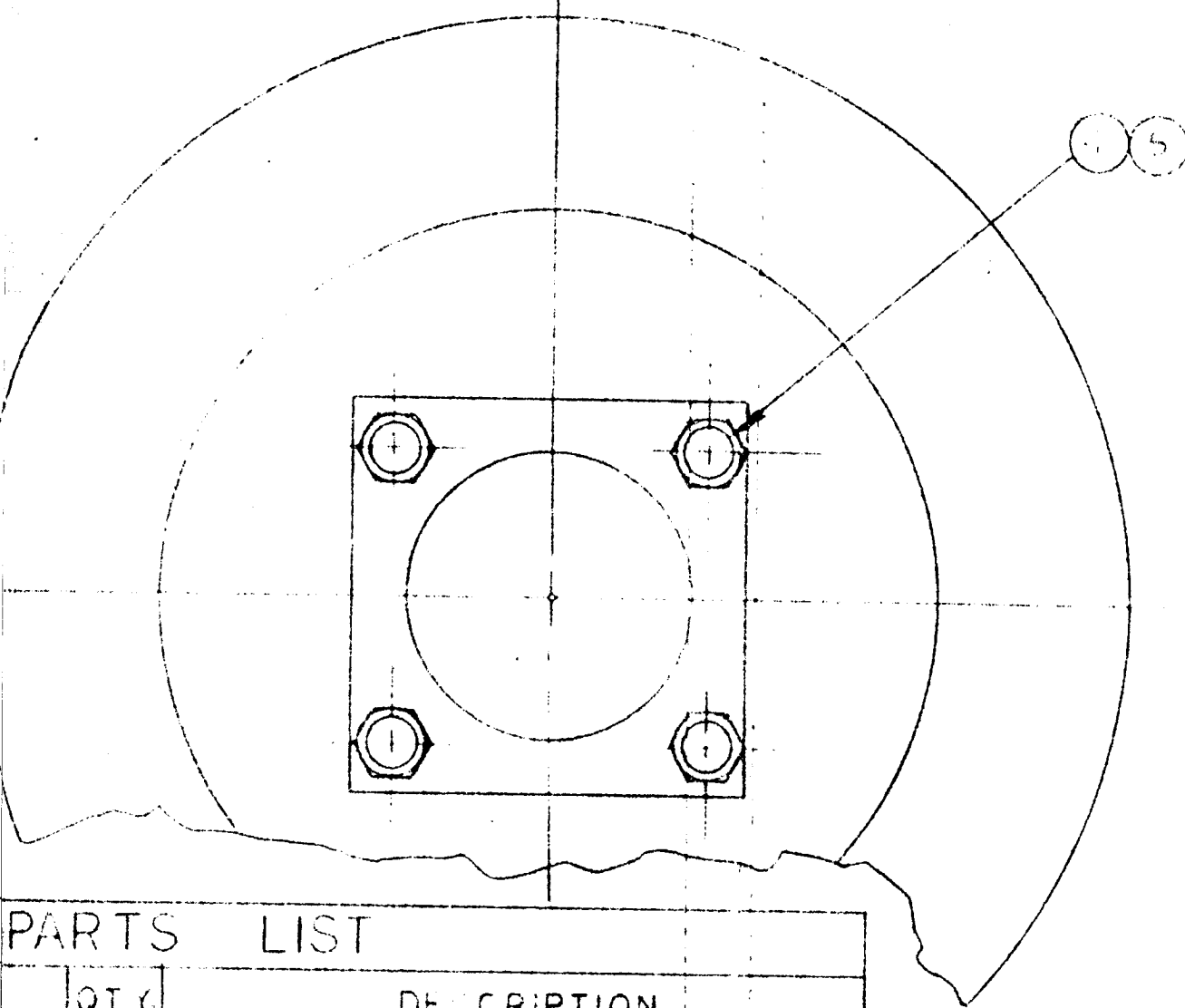
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16

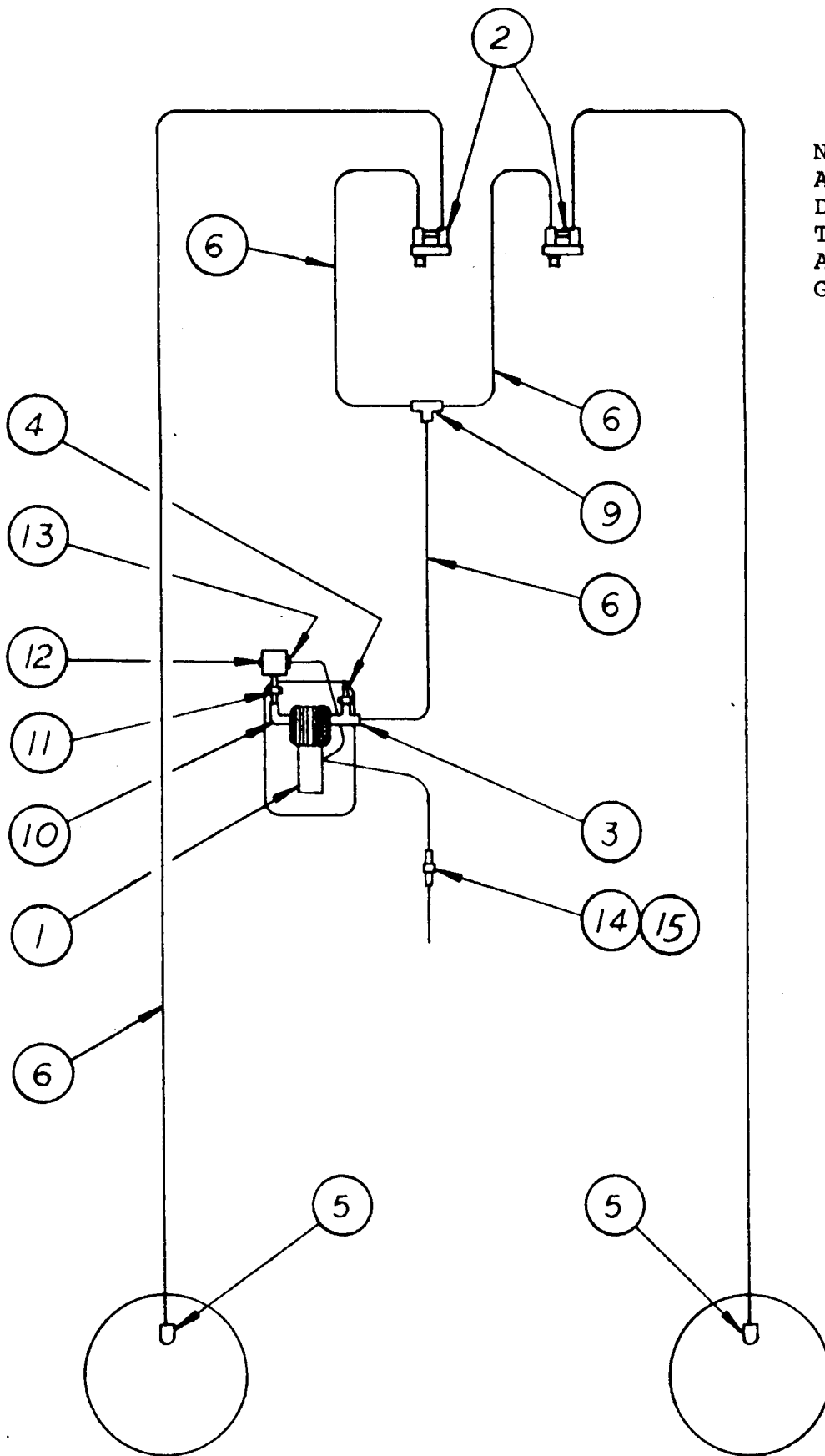


ITEM	PART NO.
1	905 44 505
2	900 44 563
3	900 44 564
4	930 00 50
5	934 00 180
6	900 44 490
7	935 00 135
8	900 44 361
9	900 44 363
10	900 44 364
11	900 44 365
12	900 44 361
13	939 00 121
14	939 00 122
15	938 00 069
16	900 44 366
18	939 00 123

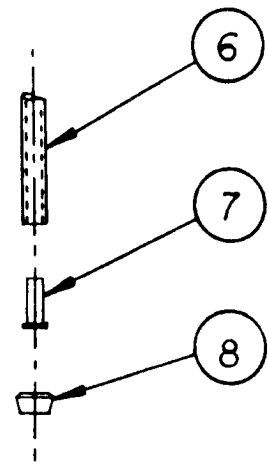


PARTS LIST

QTY.	DESCRIPTION
1	AXLE SUB-ASSEMBLY
1	12x2 1/2 HYD. BRAKE L.H.
1	12x2 1/2 HYD. BRAKE R.H.
8	1/2-13 x 1 1/4 CAP SCREW
8	1/2-13 LOCK NUT
2	#865 HUB AND DRUM
16	9/16-18 HUB STUDS
2	OUTER BEARING CUP
2	INNER BEARING CUP
2	INNER BEARING CONE
2	GREASE SEAL
2	OUTER BEARING CONE
2	SPINDLE WASHER
2	SPINDLE NUT
2	COTTER PIN
2	GREASE CAP
16	9/16-18 WHEEL STUD NUT



NOTE: PLUMBING FOR AIR SUSPENSION MAY VARY DEPENDING ON MANUFACTURERS PREFERENCE FOR AIR COMPRESSOR AND GAUGE PANEL LOCATIONS.



ITEMS 7 & 8 MUST BE USED AT EVERY TUBING CONNECTION



NEWAY DIVISION
MUSKEGON, MICHIGAN, U.S.A.

PARTS LIST

PARTS LIST # 421 80 032

DATE _____

11-5-76

SPRING CENTERS

BEAM CENTERS.

AXLE SIZE.**AXLE TYPE.**

CAPACITY.

NAME VACUUM POWER BRAKE KIT

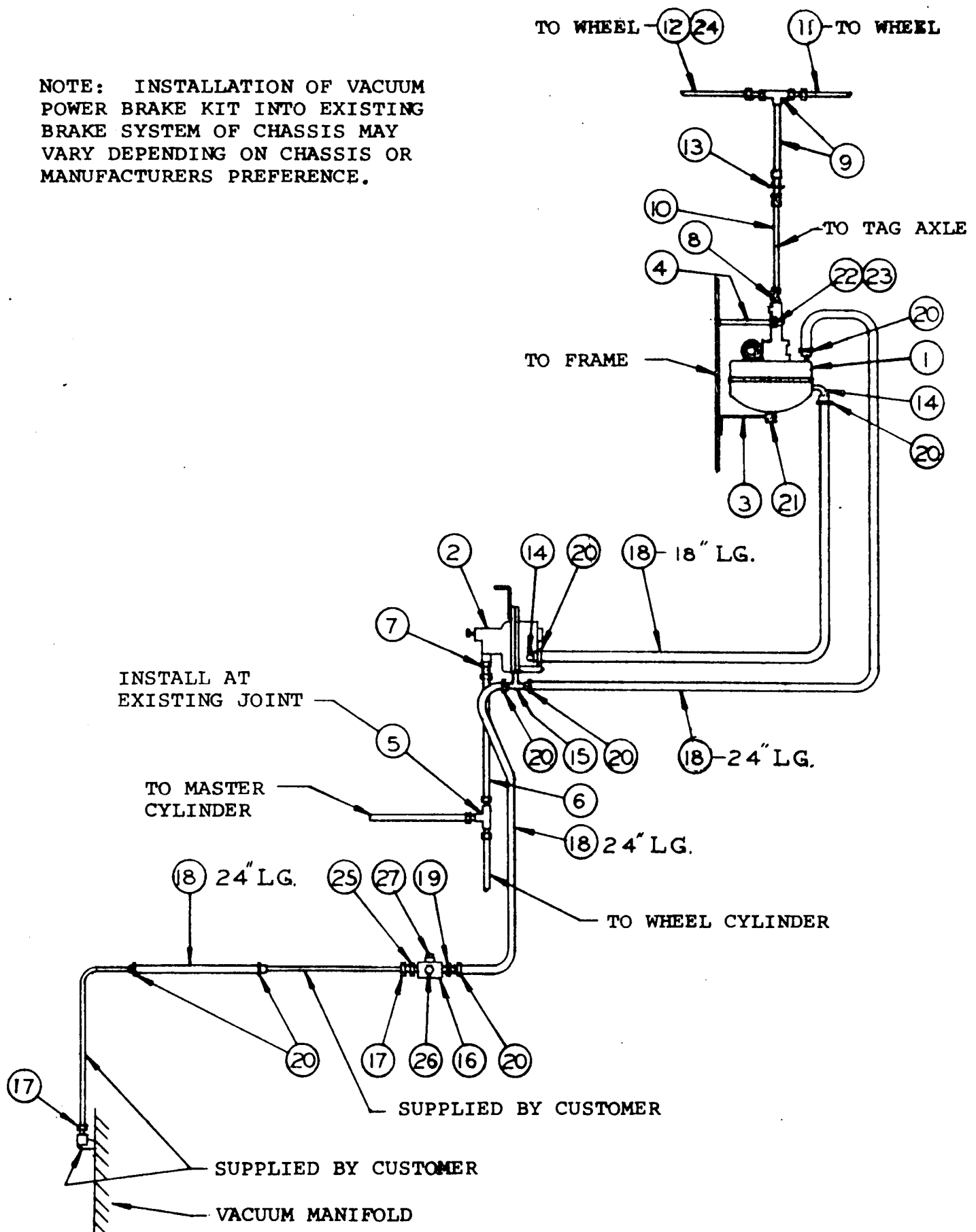
MODEL NO. _____

DRAWING NO. 420 10 177

SHEET 1 OF 1

ITEM NO.		PART NO.	NO. REQ'D.				PART NAME	Part No.
1	1	900 44 380	1				Ultravac	035950
2	2	900 44 381	1				Synchronizing Valve	035715
3	3	900 18 344	1				Bracket	035952
4	4	900 18 345	1				Bracket	035953
5	5	900 54 366	1				3/16" Service Tee	035955
6	6	900 54 367	1				3/16" Hydraulic Line - 30"	035971
7	7	900 54 368	1				1/8" Pipe - 3/16" Inv. Flare Conn.	035956
8	8	900 54 371	1				3/16"-1/4 Inv. Flare Connection	035957
9	9	900 54 406	1				3/16" Hydraulic Hose	
10	10	900 54 372	1				3/16" Hydraulic Line 72"	035972
	11	900 54 373	1				3/16" Hydraulic Line 20"	035973
12	12	900 54 374	1				3/16" Hydraulic Line 40"	035974
13	13	900 44 391	1				Spring Clip - Hydraulic Hose	035958
14	14	900 54 369	2				1/2" Vac. - 3/8" pipe 90° Elbow	035951
15	15	900 54 370	1				Tee - 1/2" Vac. - 3/8" pipe	035930
16	16	900 54 401	1				Check Valve	035985
17	17	900 54 379	2				1/2" Inverted Flare Nuts	035961
18	18	900 54 380	90				1/2 Vac. Hose (3 pcs. 24", 1 pc. 18")	035963
19	19	900 54 381	1				1/2 Vac. Hose 3/8" NPT Hose Nipple	035965
20	20	900 54 382	8				1/2 Vac. Hose Clamps	035966
21	21	934 00 481	1				1/2"-20 Lock Nut	035837
22	22	930 02 680	2				7/16"-20 x 1 Cap Screw	033716
23	23	936 00 070	2				7/16" Lock Washer	030423
24	24	900 44 116	1				Bracket-At axle for Hydraulic Line	035967
25	25	900 54 402	1				Male Connector 3/8 NPT-1/2 Inv. Flare	035988
26	26	938 00 148	1				1/8 NPT Pipe Plug	035986
27	27	938 00 196	1				3/8 NPT Pipe Plug	035987

NOTE: INSTALLATION OF VACUUM POWER BRAKE KIT INTO EXISTING BRAKE SYSTEM OF CHASSIS MAY VARY DEPENDING ON CHASSIS OR MANUFACTURERS PREFERENCE.



SERVICING PROCEDURE

Air Compressor, 905 54 067

1. DRIVE BELT

While rotating the compressor by hand, gradually work the belt off the pulley that is installed with the flange toward the mounting bracket.

NOTE: When installing a drive belt:

- A. Place the belt on the pulley with its flange to the front, and gradually start the belt onto the other pulley.
- B. Rotate the compressor by hand until the belt is completely onto the pulleys.

2. INTAKE ASSEMBLY

- A. Remove the spring wire filter assembly retainer.
- B. Remove the filter cover, filter, and filter holder assembly.
- C. The filter may be replaced or it may be cleaned with soap and water and squeezed dry.

3. MOTOR PULLEY

Loosen headless set screw in the pulley and slide the pulley off the motor shaft.

4. MOTOR ASSEMBLY

- A. Remove drive belt, Step #1.
- B. Remove two hex nuts that hold the motor to the bracket.

5. CYLINDER HEAD, EXHAUST VALVE & HEAD PLATE

- A. Remove four hex screws, holding the head to the housing assembly.
- B. Usually, the head, exhaust valve and head plate will come off as a unit. These parts may be separated by inserting a knife blade between the head and exhaust valve and gradually working them apart. Carefully note the relationship of the red silicone rubber exhaust valve reed portion of the exhaust valve to the valve holes in the head plate. The relationship must be maintained to insure proper compressor operation.



NEWAY DIVISION
MUSKEGON, MICHIGAN, U.S.A.

PARTS LIST

PARTS LIST # 481 00 139

DATE
7/23/76

SPRING CENTERS

BEAM CENTERS.

AXLE SIZE**AXLE TYPE.****CAPACITY**

NAME AIR COMPRESSOR SERVICE PARTS

MODEL NO. SRK -91

DRAWING NO. 905 54 062

SHEET 4 OF 4

[illegible]