

## Operating & Maintenance

### A TO RAISE HOIST

1. Start Engine in neutral
2. Depress the clutch and engage the P.T.O.
3. Release the clutch and open the hydraulic valve.  
If the pump squeals, oil is by-passing in the valve and indicates maximum pressure.  
By-passing can occur.

- At the extremes of cylinder travel
- If hoist overloaded or jammed and not allowed to work freely
- If the hydraulic hose is not connected from the pressure port of the pump to the pressure port of the cylinder.  
(In a Double Acting System, the return port is set at 1000 P.S.I. and will not lift a full load if that port is connected to the clevis end of the cylinder.)

### B TO LOWER HOIST

1. In a Double Acting system, the pump must be running to lower the hoist, otherwise air will get into the system and the reservoir may overflow.
2. Push the dash control to open valve. Be careful – Do not lower heavy loads quickly or damage to the hoist or truck can occur.
3. Idle the engine and hold the valve open until the pump indicates the truck box is locked down on the chassis in a Double Acting System.
4. Disengage the P.T.O. when dumping cycle is completed, otherwise the pump wears needlessly, and the drive and pump can be damaged.

**C** Check that all hydraulic hose connections are tight.

**D** Check your pump reservoir oil level. Keep dirt and other foreign material from getting into your hydraulic system, oil should be changed once a year.

**E** Check all welds and bolts to ensure that all connections are secured.

**F** Grease your hoist regularly.



*CAUTION*



When greasing or checking hoist in its open position,  
always block the truck box so that it cannot come down.

### TROUBLE SHOOTING

#### 1. Hoist not operating properly

- Hydraulic hoses may not be connected to proper ports, check installation instructions (see 4).
- Insufficient oil in reservoir.
- The power take-off is not working.
- Pump not working, cable control may not be set properly and not operating the pump valve correctly.
- Pump relief valve is not set properly and the pump is not developing required pressure. Check pressure, if not proper return pump to factory.
- Hydraulic cylinder seals are worn or damaged and oil is by-passing piston. (Check pressure).
- Hoist is overloaded, check weight of load and hoist rating at that particular mounting distance and box overhang. (See capacity chart).
- Severe cold spell and the hydraulic oil used is too viscous or heavy-use automatic transmission fluid.
- Noisy operation – drive shaft too long may require a steady bearing or u-joints are not aligned properly, check that the pins on each yoke are parallel to each other.
- Hoist operation is not smooth, but spongy – bleed air from hydraulic system by operating hoist up and down.
- Truck box long beams are not strong enough and under load are bending, twisting and jamming the hoist and preventing it from working freely – stiffen sills and put in a cross-member to stop the sills from twisting.

# LIFTING CAPACITY Single Axle Truck

## MODEL DH 90

CAB TO AXLE (CA)	BODY LENGTH	BODY OVERHANG	TONS AT DUMP ANGLE BODY & PAY LOAD (3000 P.S.I.)		
			40°	45°	50°
60"	9'	18"	15.1	13.5	12.2
72"	9'	6"	11.3	10.1	9.2
72"	10'	18"	13.0	11.6	10.5
84"	10'	6"	10.1	9.0	8.1
84"	11'	18"	11.3	10.1	9.2
84"	12'	30"	13.0	11.6	10.5
102"	13'	24"	10.1	9.0	8.1
Approximate Mounting Distance			84"	75"	68"

Capacity based on an evenly distributed load, a 3" truck box to cab clearance and a truck box pivot location 33"-36" behind the center of the truck axle.

## HOIST SPECIFICATIONS

DH 90	
No. of cylinders	1
Cylinder Bore	5"
Maximum Operating Pressure (P.S.I.)	3000
Piston stroke	16"
Piston rod diameter (chromed)	2 1/4"
Mounting height	6 1/2"
Recommended long beams	6"
Weight approximate (lbs.)	444



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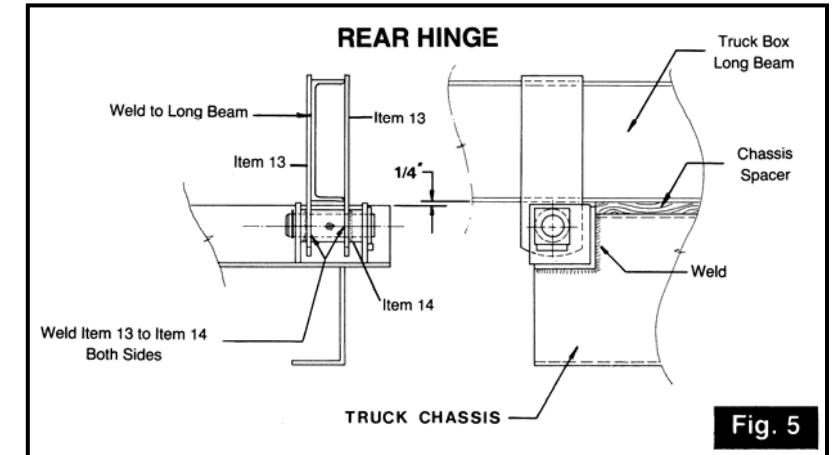


Fig. 5

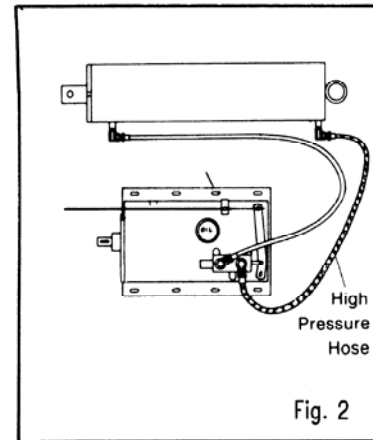


Fig. 2

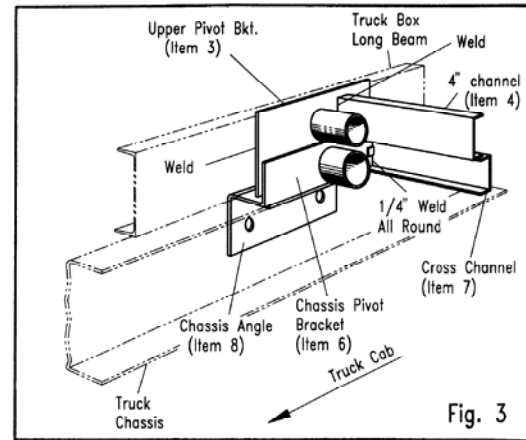


Fig. 3

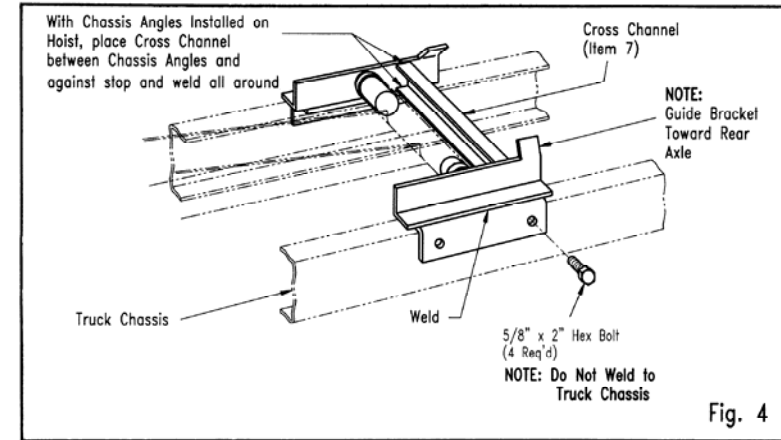


Fig. 4

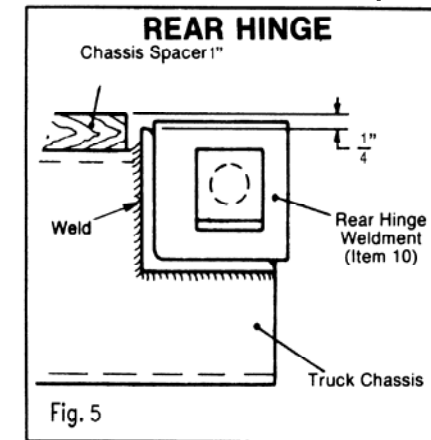
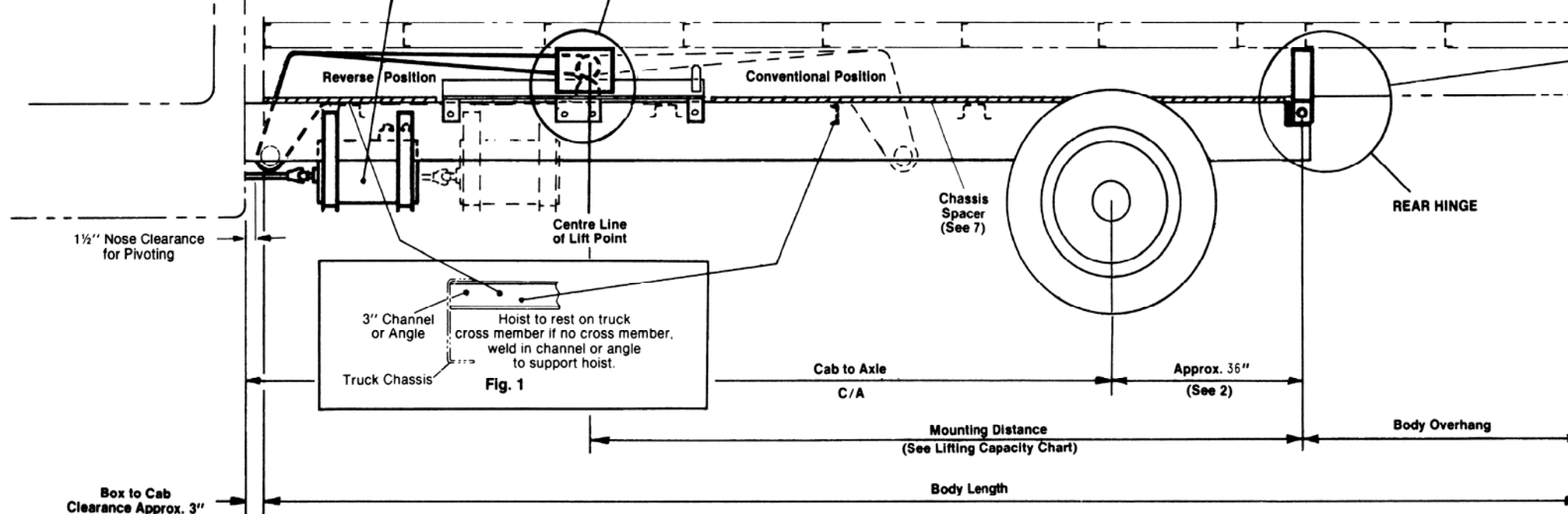


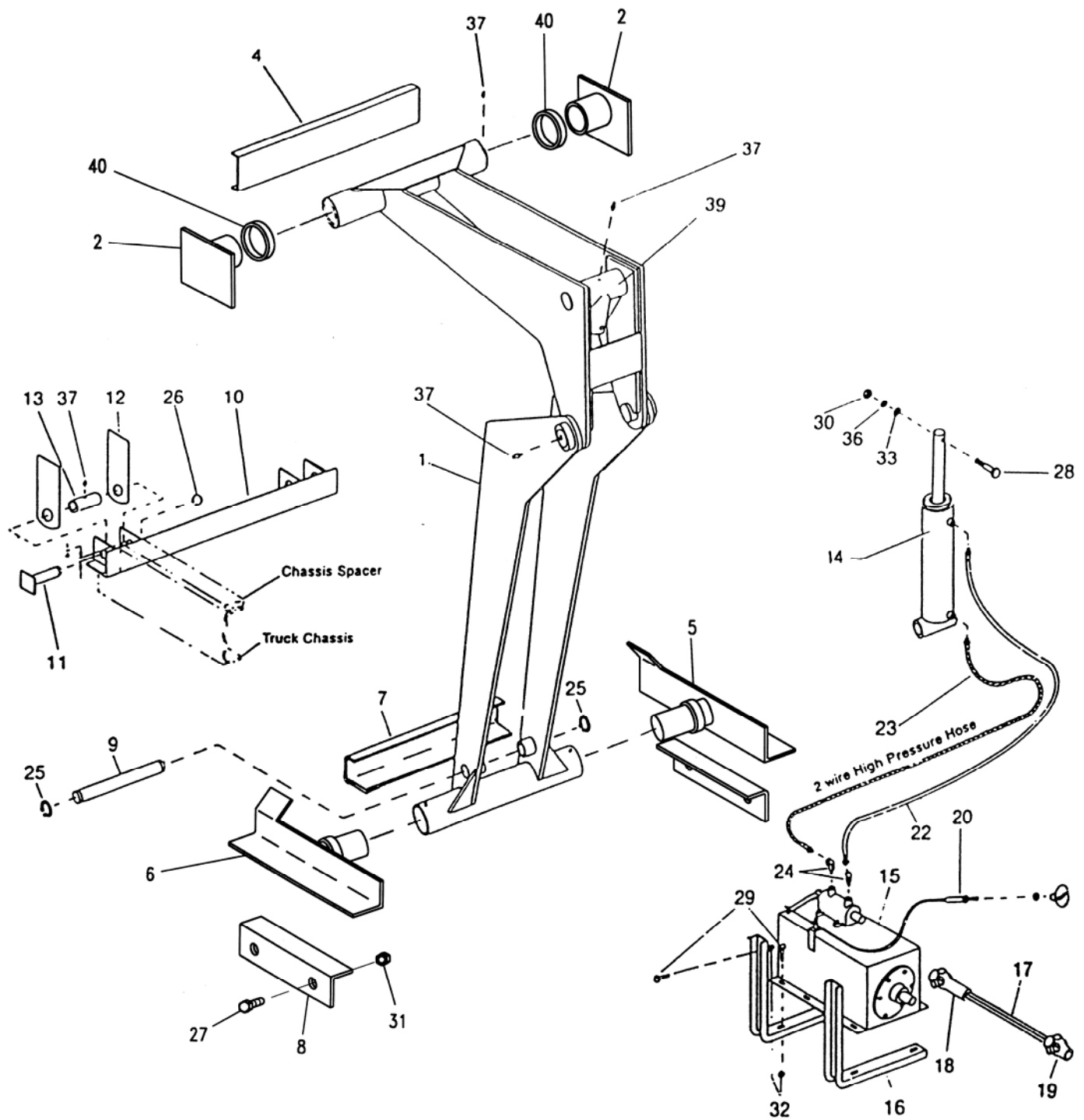
Fig. 5



**CAUTION**  
When greasing or checking hoist in its open position, always block the truck box so that it can not come down.

The combined weights of the truck chassis, hoist and platform (or body), and cargo must not exceed the gross vehicle weight rating (GVWR) of the truck.

# HOIST MOUNTING DIAGRAM



### DH 90 PARTS LIST

ITEM	DESCRIPTION	PART	QTY	ITEM	DESCRIPTION	PART	QTY
1	HOIST LEVER WELDMENT	4094W	1	19	STANDARD U-JOINT	S212	1
2	UPPER PIVOT BRACKET WELDMENT	15747W	2	20	DASH CONTROL CABLE	S228	1
4	UPPER PIVOT CROSS CHANNEL	1202	1	22	3/8" x 84" 2-WIRE HYDRAULIC HOSE	S117	1
5	CHANNEL PIVOT BRACKET L.H.	15466W	1	23	3/8" x 60" 2-WIRE HYDRAULIC HOSE	S125	1
6	CHANNEL PIVOT BRACKET R.H.	15465W	1	24	3/8" x 90" SWIVEL ADAPTOR	S109	4
7	CHASSIS BRACKET CROSS CHANNEL	16176	1	25	1 1/2" EXTERNAL SNAP RING	S102	4
8	CHASSIS ANGLE	1388	2	27	5/8" UNC x 2" LG HEX. BOLT	S2151	4
9	CYLINDER CLEVIS SHAFT	16180	1	28	7/16" UNC x 3" (GRADE 8) HEX. BOLT	S231	1
10	REAR HINGE WELDMENT	179807W	1	29	3/8" UNC x 1" LG WHIZLOCK BOLT	S196	4
11	REAR HINGE PIN WELDMENT	179808W	2	30	7/16" UNC HEX. NUT	S232	1
12	HINGE PLATE	145	4	31	5/8" UNC HEX. NUT	S2152	4
13	HINGE PIN BUSHING	129	2	32	3/8" UNC WHIZLOCK NUT	S200	4
14	5" HYDRAULIC CYLINDER	3349A	1	33	1/2" Ø FLAT WASHER	S234	1
15	4 PISTON PUMP	S218	1	36	7/16" Ø LOCKWASHER	S278	1
15A	PUSH BUTTON ELECTRIC PUMP (OPTIONAL)	X3190	1	37	ZERCK GREASE FITTING	S132	6
16	PUMP BRACKET	135	2	38	HYDRAULIC CYLINDER SEAL KIT	X130	1
17	DRIVE SHAFT	1424	1	39	CAST TEE ASSEMBLY	1683	1
18	SLIP U-JOINT	S211	1	40	SPACER	1441	2