

# CHALLENGER®



## OWNER'S MANUAL

# ALUMINUM & STEEL CAR CARRIERS

Parts, Installation & Maintenance

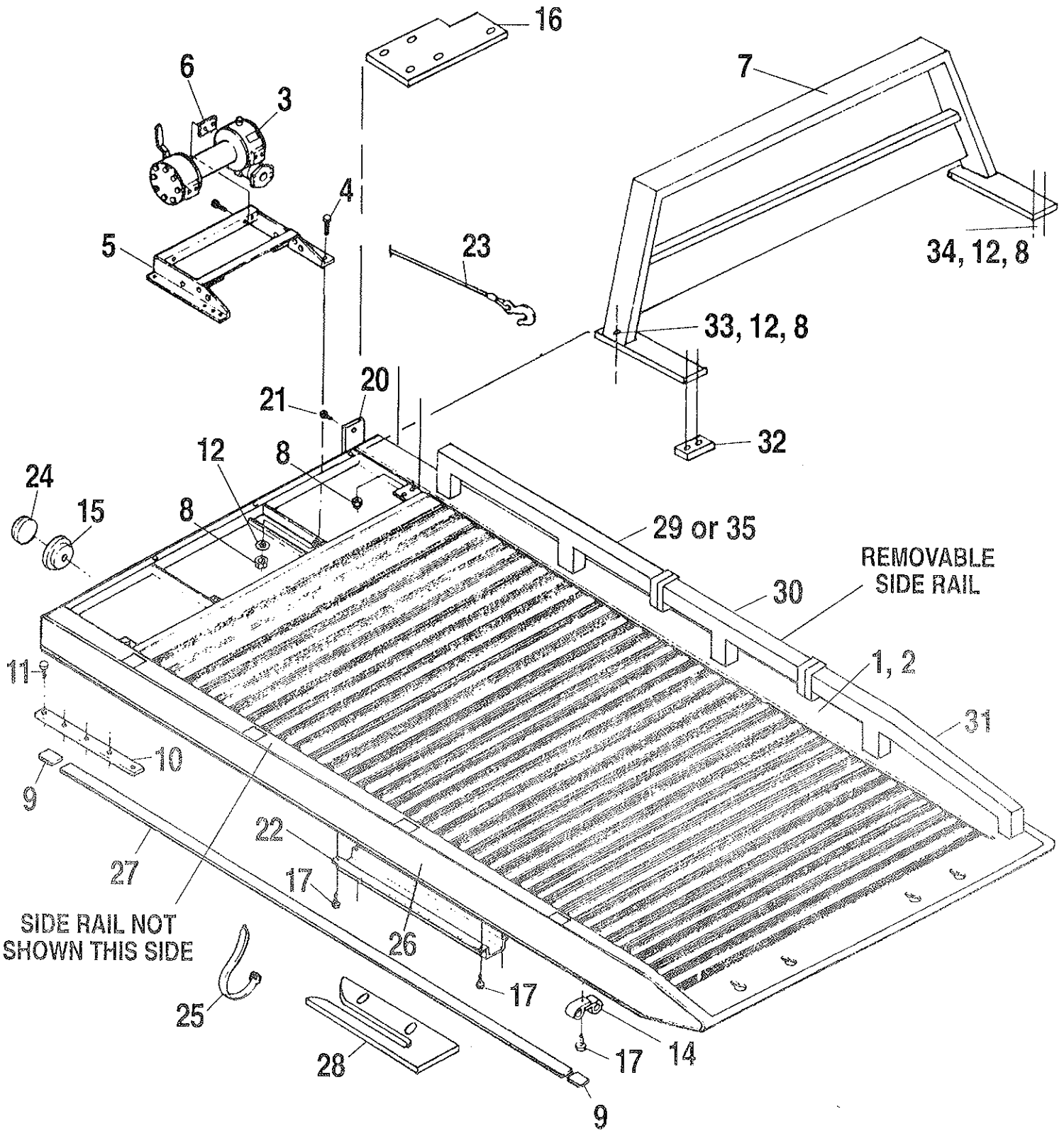
I-75 at Ooltewah Exit #11 • 8503 Hilltop Drive • Ooltewah, Tennessee 37363 • (615) 238-4171

Mailing Address: P.O. Box 120 • Ooltewah, Tennessee 37363 • FAX (615) 238-5371

PRICE \$15.00      PART NO. 0500801



# SECTION I - PARTS ALUMINUM BED ASSEMBLY

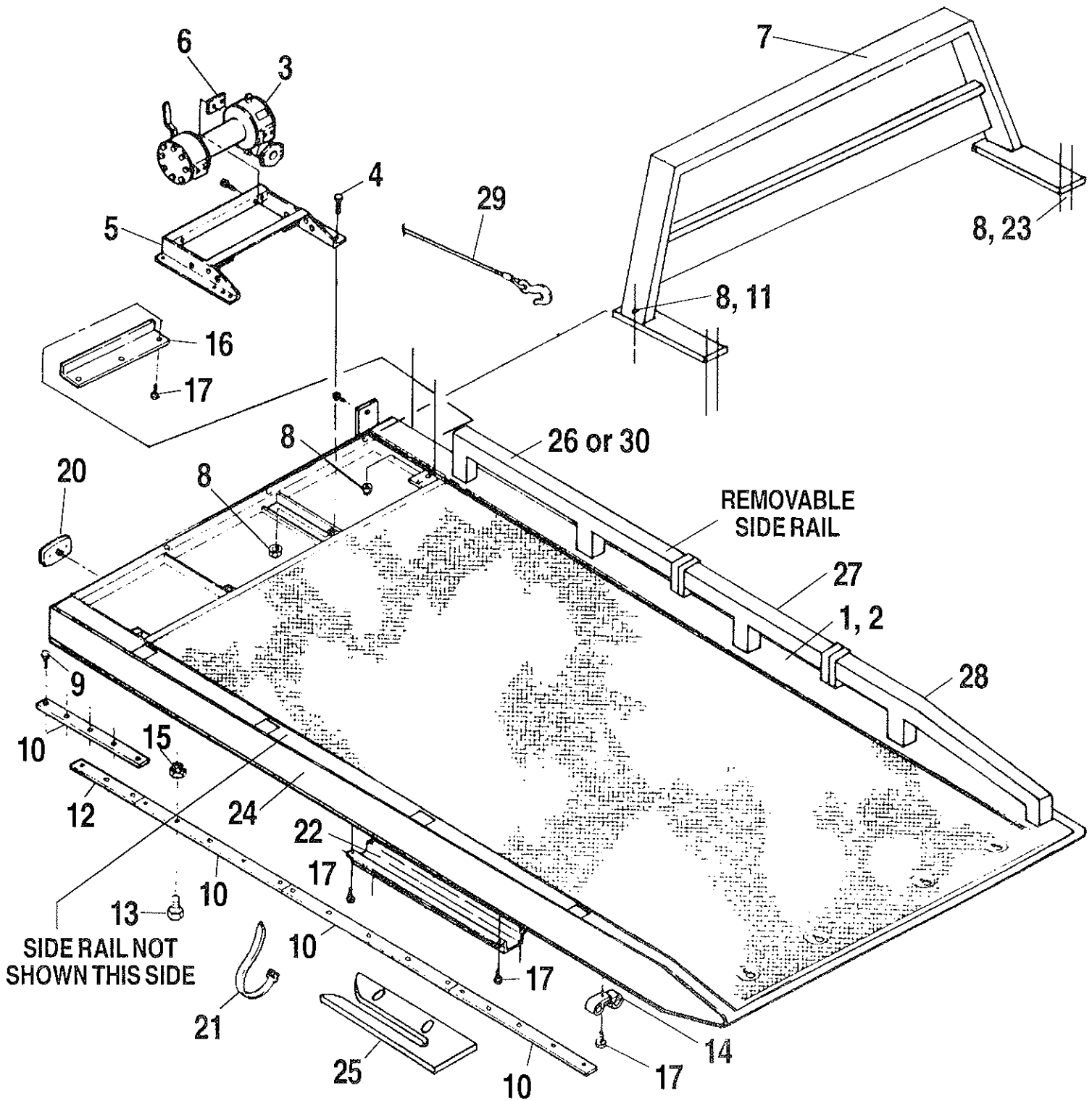


# SECTION 1 - PARTS

## ALUMINUM BED ASSEMBLY

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0805033	CAR CARRIER 19' ALUMINUM
2	1	0805034	CAR CARRIER 21' ALUMINUM
3	1	0300250	WINCH ASS'Y.
4	2	0400181	SCREW, 1/2" - 1-1/2" LG. HEX HD. CAP
5	1	0801482	WINCH MOUNTING BRACKET
6	2	0701172	SPACER WINCH BRACKET
7	1	0805020	CAB PROTECTOR (SPECIFY HEIGHT)
8	16	0400408	NUT, 1/2" - 13 NYLON LOCK
9	4	0702517	BEARING PAD STOP BAR
10	2	0302027	BEARING PAD
11	8	0400088	SCREW, 1/4" - 20 x 5/8" LG. BRASS
12	16	0400492	WASHER, 1/2" FLAT
14	14	0300134	HOSE CLAMP
15	2	0301740	GROMMET, LIGHT ASSEMBLY MOUNTING
16	1	0709868	COVER PLATE (BOTTOM)
17	15	0400077	SCREW, SELF-DRILLING
20	2	0709869	CAP, END
21	6	0400044	SCREW, DRIVE
22	1	0704799	TRAY, HOSE
23	1	0301669	CABLE ASS'Y, WINCH
24	2	0301742	LIGHT ASSEMBLY, AMBER
25	8	0300132	WIRE TIE
26	2	0500235	DECAL, ARROW
27	2	0302180	BEARING PAD
28	1	0708913	ANTI TILT PLATE
29	2	0802660	FRONT REMOVABLE SIDE RAIL (19' CARRIER)
30	2	0802661	CENTER REMOVABLE SIDE RAIL
31	2	0802662	REAR REMOVABLE SIDE RAIL
32	2	0709870	CAB PROTECTOR REINFORCEMENT PLATE
33	2	0400181	SCREW, 1/2" - 13 x 1-1/2" LG. HEX HD. CAP
34	4	0400237	SCREW, 1/2" - 13 x 4" LG. HEX HD. CAP
35	2	0805038	FRONT REMOVABLE SIDE RAIL (21' CARRIER)

# SECTION I - PARTS STEEL BED ASSEMBLY

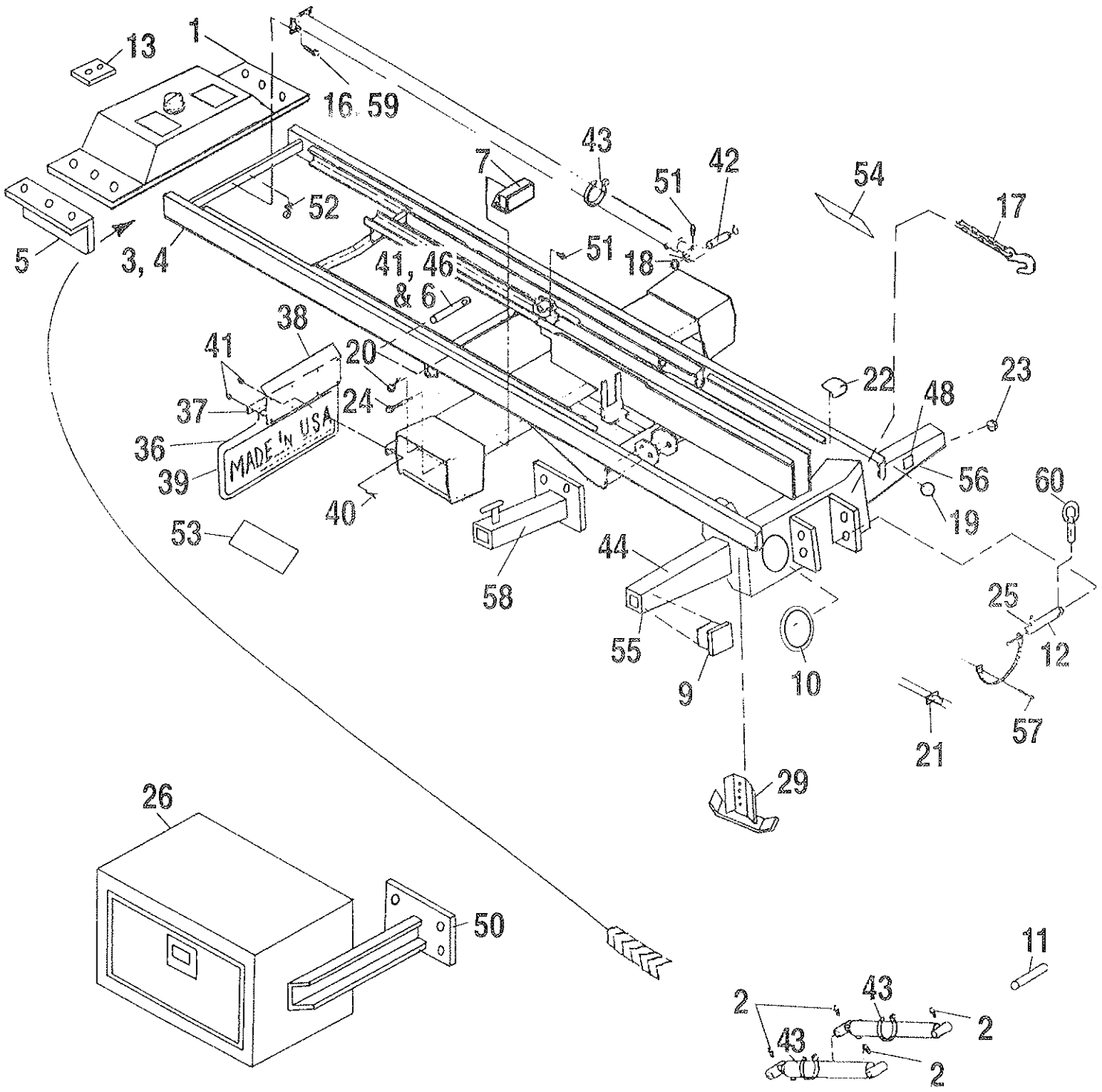


# SECTION 1 - PARTS

## STEEL BED ASSEMBLY

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0805047	CAR CARRIER 19' STEEL
2	1	0805048	CAR CARRIER 21' STEEL
3	1	0300250	WINCH ASS'Y.
4	4	0400181	SCREW, 1/2" - 13 x 1-1/2" LG. HEX HD. CAP
5	1	0801482	WINCH MOUNTING BRACKET
6	2	0701172	SPACER, WINCH BRACKET
7	1	0805020	CAB PROTECTOR (SPECIFY HEIGHT)
8	14	0400408	NUT, 1/2" - 13 NYLON LOCK
9	8	0400088	SCREW, 1/4" - 20 x 5/8" LG. BRASS
10	8	0302027	BEARING PAD
11	2	0400177	SCREW, 1/2" - 13 x 1-1/4" LG. HEX HD. CAP
12	2	0302200	BEARING PAD
13	38	0400089	SCREW, 1/4" - 20 x 1" LG. BRASS
14	2	0300134	HOSE CLAMP
15	38	0400367	NUT, 1/4" - 20 NYLON LOCK
16	1	0705332	COVER PLATE, BOTTOM
17	13	0400077	SCREW, SELF-DRILLING
20	2	0301887	LIGHT ASS'Y, AMBER
21	8	0300132	WIRE TIE
22	1	0705331	TRAY, HOSE
23	4	0400211	SCREW, 1/2" - 13 x 1-3/4" LG. HEX HEAD CAP
24	2	0500235	DECAL, ARROW
25	1	0708913	ANTI TILT PLATE
26	2	0802660	FRONT REMOVABLE SIDE RAIL (19' CARRIER)
27	2	0802661	CENTER REMOVABLE SIDE RAIL
28	2	0802662	REAR REMOVABLE SIDE RAIL
29	1	0301669	CABLE ASS'Y, WINCH
30	2	0805039	FRONT REMOVABLE SIDE RAIL (21' CARRIER)

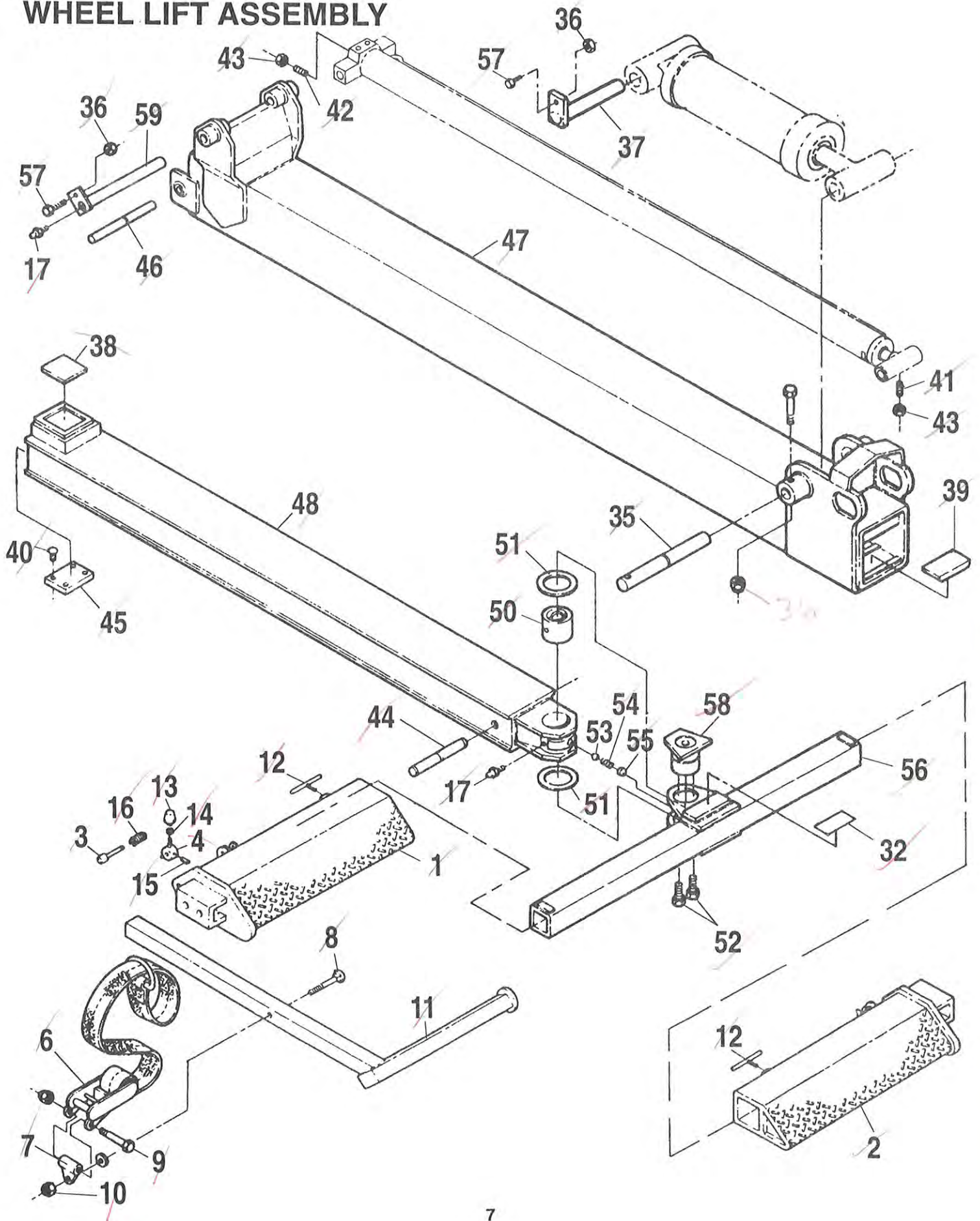
# SECTION I - PARTS TILT FRAME ASSEMBLY



# SECTION I - PARTS MOUNTING AND TILT FRAME ASSEMBLY

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0802669	RESERVIOR ASS'Y
2	4	0300113	GREASE FITTING
3	1	0805019	SUB FRAME, INDEPENDENT WHEEL LIFT
4	1	0805035	SUB FRAME, INDEPENDENT TOW BAR
5	2	0802668	OIL TANK MOUNTING BRACKETS (SPECIFY FRAME WIDTH)
6	1	0704792	REAR HINGE PIN
7	1	0301800	JUNCTION BOX
9	2	0302986	TAIL LIGHT (CHASSIS TAKE OFF)
10	2	0304147	WORK LIGHT
11	4	0702434	SHAFT, LIFT CYLINDER
12	1	0709867	PIN, SAFETY
13	2	0302983	WEAR PAD & SCREWS
16	20	0400211	SCREW 1/2" - 13 x 1-3/4" LG. PL. HEX HEAD CAP
17	2	0301932	SAFETY CHAIN W / HOOKS 10' LG.
18	10	0301642	SNAP RING, 1-1/4"
19	1	0301671	SOCKET, TOW LIGHT
20	2	0300867	ILLUMINATOR, CONTROL PANEL
21	1	0300273	ILLUMINATOR, LICENSE PLATE
22	2	0301958	SKUFF PAD, SAFETY CHAIN
23	2	0302987	LIGHT, SEALED RED MARKER
24	1	0300686	THROTTLE (25 ft.) ASS'Y
25	1	0400564	ROLL PIN
26	1	0302988	TOOL BOX
29	2	0802666	EXTENSION STAND
36	2	0306001	MUD FLAP
37	2	0705092	BAR, MUD FLAP
38	2	0704793	BRACKET, MUD FLAP MOUNTING
39	9	0400122	SCREW, 3/8" - 16 x 1-1/4" LG. PL. HEX HEAD CAP
40	4	0400121	SCREW, 3/8" - 16 x 3/4" LG. PL. HEX HEAD CAP
41	20	0400392	NUT, 3/8" - 16 NYLON LOCK
42	1	0703960	PIN, EXTEND CYLINDER
43	18	0300132	CABLE TIE
44	8	0301601	CLAMP, INSULATED WIRE
46	1	0400150	SCREW, 3/8" - 16 x 2-1/2" PL. HEX HEAD CAP
47	12	0400045	SCREW, #10 - 32 x 1/2" LG. SELF-TAPPING
48	1	0303061	BACK UP ALARM
50	2	0802667	TOOL BOX MOUNTING BRACKET
51	3	0301397	GREASE FITTING, 90°
52	4	0300134	CLAMP, INSULATED WIRE
53	1	0500425	DECAL, CONTROL STATION (L.H.)
54	1	0500428	DECAL, CONTROL STATION (R.H.)
55	1	0802664	TAIL LAMP HOUSING, LEFT
56	1	0802665	TAIL LAMP HOUSING, RIGHT
57	1	0700584	CHAIN, 12" SASH
58	2	0802663	L-ARM STORAGE TUBE BRACKET
59	20	0400408	NUT, 1/2" - 13 NYLON LOCK
60	1	0302474	LYNCH PIN

# SECTION I - PARTS WHEEL LIFT ASSEMBLY



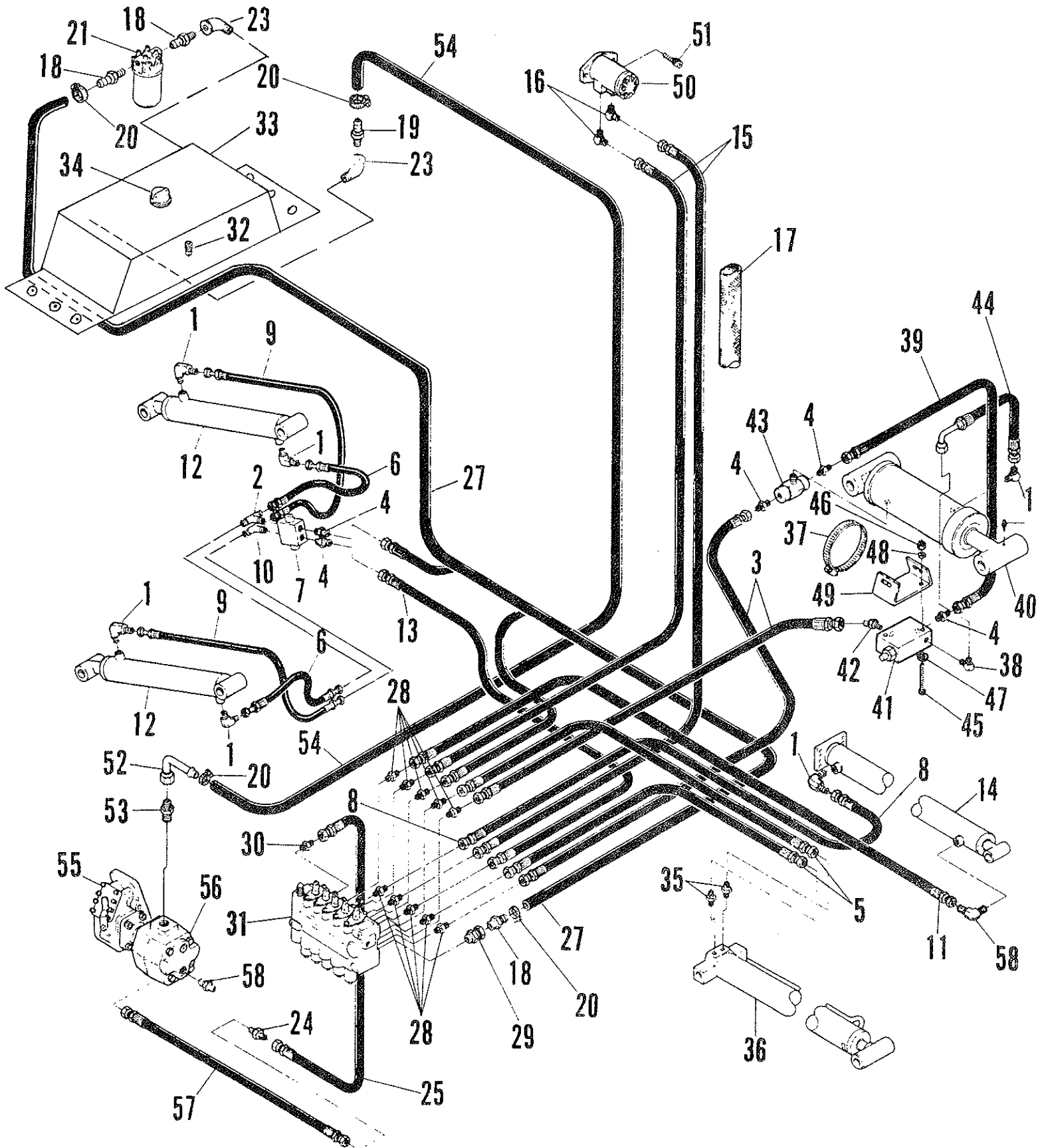


# SECTION 1 - OPTIONAL EQUIPMENT OUTER CROSS TUBE & SLIDE-IN TIRE RESTRAINT ASS'Y

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0800912	CROSS TUBE, LEFT OUTER
2	1	0800913	CROSS TUBE, RIGHT OUTER
3	2	0701916	PIN, PLUNGER
4	1	0800837	HANDLE, LEFT PLUNGER
5	1	0800838	HANDLE, RIGHT PLUNGER
6	2	0301399	RATCHET, TIE DOWN (INCLUDES SCREW & NUT)
7	2	0800583	PIVOT, TIE DOWN
8	2	0400161	BOLT, 3/8" - 16 x 2-3/4" CARRIAGE GR. 5 PL
9	2	0400480	WASHER, 3/8" FLAT PL.
10	2	0400390	NUT, 3/8" - 16 JAM LOCK HEX PL.
11	2	0800897	RESTRAINT, TIRE
12	2	0800590	HANDLE, TEE
13	2	0300341	KNOB
14	2	0400393	NUT, 3/8" - 16 JAM
15	2	0400560	PIN, 5/32" x 1" LG. ROLL
16	2	0301416	SPRING, PLUNGER
17	3	0300113	FITTING, GREASE
18	2	0400068	SCREW, 1/4" - 20 x 5/16" LG. SOCKET SET
19	2	0901203	HOOK LATCH ASS'Y (INCLUDES ITEMS 16-21)
20	2	0704994	LATCH, CHAIN HOOK
21	2	0400576	RIVET, POP
22	2	0400519	WASHER, FLAT
23	2	0302155	SPRING, CHAIN HOOK LATCH
24	2	0400036	SCREW, #10 - 32 x 1" LG. RD HD. SLOTTED MACH. PL.
25	2	0400357	NUT, #10 - 32 NYLON LOCK PL.
26	2	0801472	RESTRAINT, TIRE
27	2	0800583	PIVOT, TIE DOWN
28	2	0400480	WASHER, 3/8" FLAT PL.
29	2	0400390	NUT, 3/8" - 16 ESLOK JAM
30	2	0400161	BOLT, 3/8" - 16 x 2-3/4" LG. GR. 8 PL. CARRIAGE
31	2	0301399	STRAP, TIE DOWN W / RATCHET
32	3	0500241	DECAL, SAFETY CHAIN WARNING
33	2	0500397	DECAL, SNAP (LATCH WARNING)
34	2	0800590	TEE HANDLE
35	1	0705238	PIN, PIVOT
36	3	0400392	NUT, 3/8" - 16 NYLON LOCK
37	1	0801012	SHAFT, LIFT CYL
38	1	0301850	BEARING PAD, 1/4" x 3" x 3" NYLON
39	1	0302183	BEARING PAD, 3/8"
40	4	0400044	SCREW, #10 x 1/2" DRIVE
41	1	0400129	SCREW, 3/8" - 16 x 3/4" LG. CUP POINT ALLEN HEAD
42	1	0400139	SCREW, 3/8" - 16 x 1-1/2" LG. HEX SOCKET
43	2	0400392	NUT, 3/8" - 16 NYLON LOCK
44	1	0702131	SHAFT, INNER TUBE CYLINDER
45	1	0703277	SLIDER, PAD
46	1	0703345	SHAFT, EXTEND CYLINDER
47	1	0801556	OUTER BOOM
48	1	0801568	INNER BOOM
49	2	0301956	STRAP, RUBBER
50	1	0301914	BEARING, INNER BOOM
51	2	0703640	WASHER, THRUST
52	2	0701956	SCREW, 1/2" - 13 x 1" LG. HEX HD CAP GR.5
53	1	0301398	BALL, DETENT
54	1	0301197	SPRING, DETENT
55	1	0702546	SPACER
56	1	0801074	CROSS TUBE, INNER WELDMENT
57	1	0400141	SCREW, 3/8" - 16 x 7/8" LG. HEX HD CAP GR.5 PL.
58	1	0801073	PIN, CROSS TUBE PIVOT
59	1	0801009	SHAFT, PIN ASS'Y, UPPER BOOM



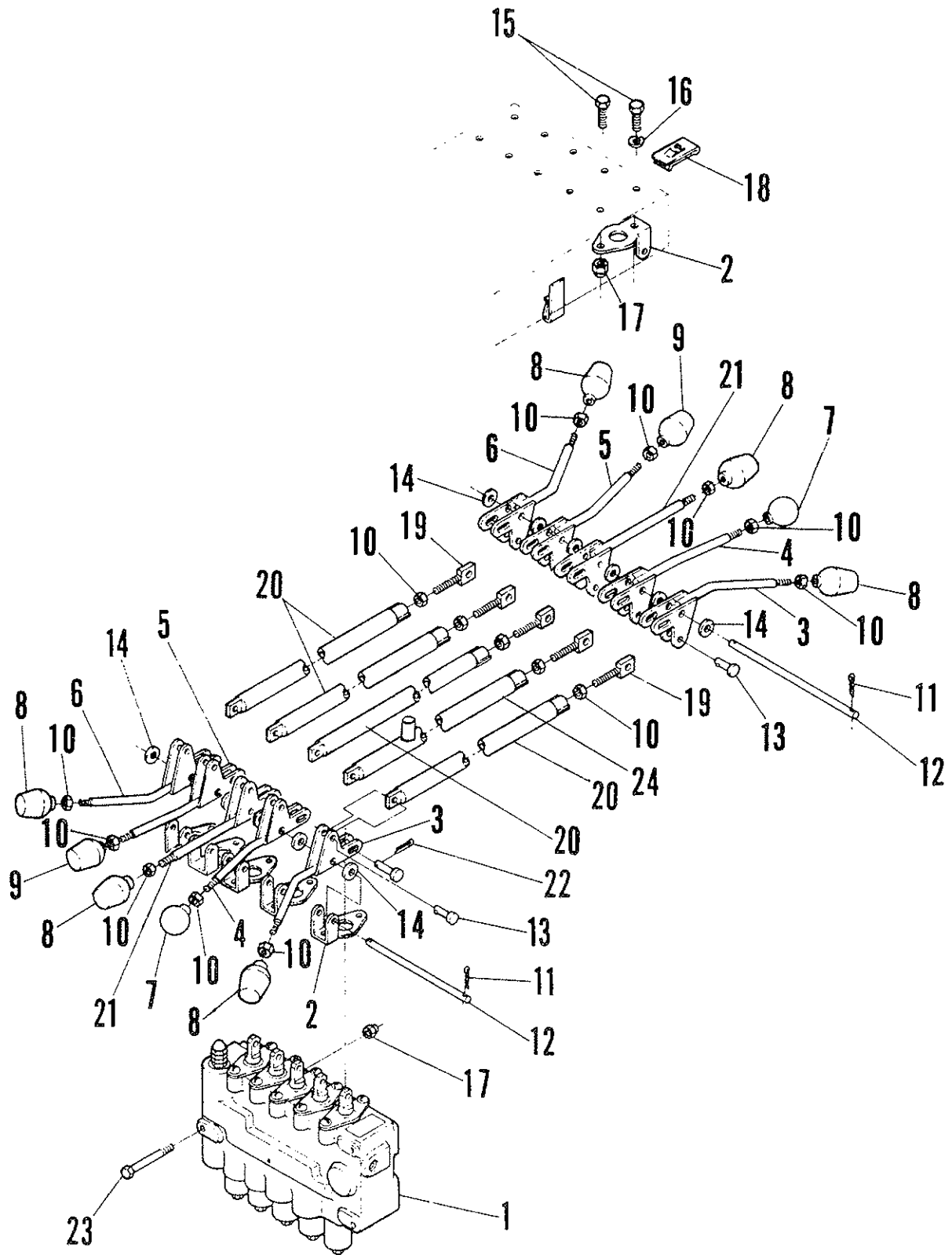
# SECTION I - PARTS HYDRAULICS



## SECTION I - PARTS (HYDRAULICS)

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	6	0300142	ELBOW, 1/2" MJ x 1/4" MP x 90°
2	2	0300208	TEE, 3/8" MJ x 3/8" MJ x 1/4" MP
3	2	0301403	HOSE, ASS'Y
4	5	0301424	CONNECTOR, 3/8" MJ x 1/4" MP
5	2	0301478	HOSE ASS'Y, 54" LG. (W/L EXTEND CYLINDER)
6	2	0301524	HOSE ASS'Y, 14" LG. (BED LIFT CYLINDER)
7	1	0301640	VALVE, BED TILT CYLINDER LOCK
8	1	0301658	HOSE ASS'Y, 128" LG. (BED EXT. CYLINDER)
9	2	0301660	HOSE ASS'Y, 21" LG. (BED LIFT CYLINDER)
10	1	0301694	ORIFICE TEE
11	1	0301769	HOSE ASS'Y, 52" LG. (BED EXT. CYLINDER)
12	2	0301796	CYLINDER, BED LIFT
13	2	0301878	HOSE ASS'Y, 137" LG. (BED LIFT LOCK VALVE)
14	1	0301970	CYLINDER, 108" STROKE BED EXTEND
15	2	0301663	HOSE ASS'Y, 204" LG. (WINCH MOTOR)
16	2	0301665	ELBOW, 3/8" MJ x 1/2" MP x 90°
17	1	0705296	SKUFF JACKET
18	3	0300055	HOSE BARB, 3/4" HOSE x 3/4" MP
19	1	0300056	HOSE BARB, 1" HOSE x 1" MP
20	4	0300071	CLAMP, 1" HOSE
21	1	0300136	FILTER ASS'Y
23	2	0300692	ELBOW, 1" x 90° STREET
24	1	0300865	CONNECTOR, 1/2" MJ x 1/2" MB
25	1	0301659	HOSE ASS'Y, 150" LG. (VALVE TO PUMP)
27	1	0704802	HOSE, 192" LG. RETURN (FILTER TO CONTROL VALVE)
28	10	0300044	CONNECTOR, 3/8" MJ x 1/2" MB
29	1	0300065	SWIVEL, 3/4" MB x 3/4" FPX PIPE
30	1	0300789	CONNECTOR, 5/8" SAE x 1/2" JIC STRAIGHT
31	1	0302179	VALVE, 5 SPOOL CONTROL
32	1	0300347	PLUG, 1/2" SQ. HD BLACK
33	1	0802669	RESERVOIR
34	1	0709871	OIL TANK TOP CAP
35	2	0301522	CONNECTOR, 3/8" MJ x 3/8" MB STRAIGHT
36	1	0302178	CYLINDER, WHEEL LIFT HYDRAULIC EXTEND
37	1	0300133	CLAMP, 3"-4" HOLDING VALVE RETAINER
38	1	0300209	ELBOW, 3/8" MJ x 3/8" MP x 90°
39	1	0301473	HOSE ASS'Y, 18" LG. (W/L HOLDING VALVE TO TEE)
40	1	0301484	CYLINDER, 8-1/4" STROKE WHEEL LIFT TILT
41	1	0301731	VALVE, WHEEL LIFT CYLINDER HOLDING
42	1	0301848	ELBOW, 3/8" JIC c 3/8" NPT x 45°
43	1	0301868	TEE, 1/4" FP x 1/4" FP x 1/4" MALE RUN
44	1	0301900	HOSE ASS'Y, 18" LG. (W/L CYL. to W/L HOLDING VALVE)
45	2	0400064	SCREW, 1/4" - 20 x 2-1/4" LG. RD SLOTTED HEAD CAP
46	2	0400366	NUT, 1/4" - 20 HEX ZINC PL
47	2	0400451	FLATWASHER, 1/4" ZINC PL
48	2	0400452	LOCKWASHER, 1/4" HELICAL ZINC PL
49	1	0703001	BRACKET, W/L HOLDING VALVE MOUNTING
50	1	0300090	MOTOR, WINCH
51	2	0400196	SCREW, 1/2" - 13 x 1-1/4" LG. SOCKET HEAD CAP
52	1	0302170	SWIVEL, 90° BENT TUBE
53	1	0301780	CONNECTOR, STRAIGHT THREAD "O" RING
54	1	0300058	HOSE, 1" DIA. SUCTION (PUMP TO RESERVOIR)
55	1	0302037	PTO
56	1	0302166	PUMP, HIGH PRESSURE HYDRAULIC
57	1	0300165	HOSE ASS'Y, 91" LG. HI-PRESSURE
58	1	0302160	ELBOW, 6 MJ - 4 MP 90 L

# SECTION I - PARTS CONTROL & CROSSROD ASSEMBLY

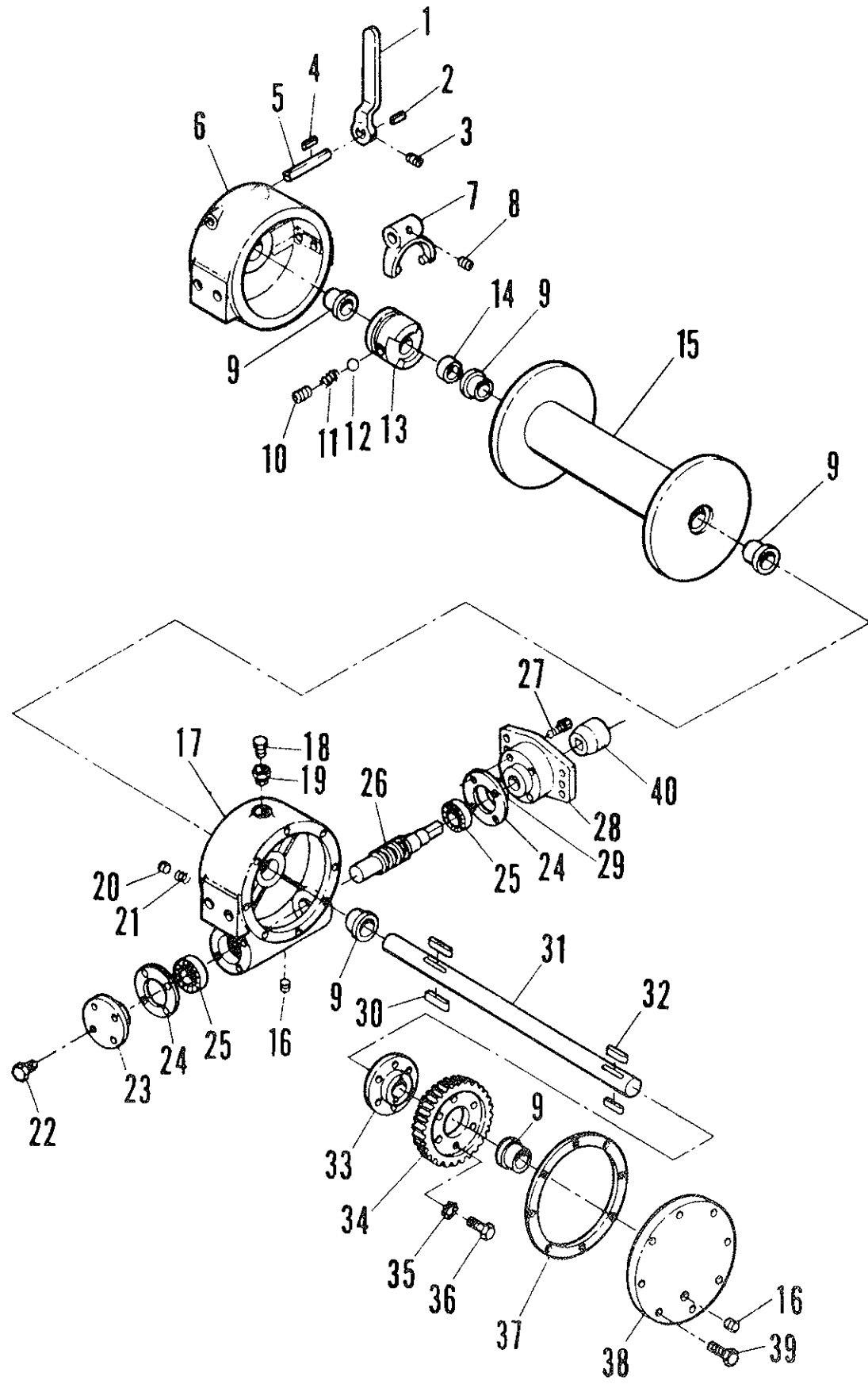




# SECTION 1 - PARTS CONTROL & CROSSROD ASSEMBLY

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0302179	5-SPOOL CONTROL VALVE
2	10	0301638	BRACKET, CONTROL HANDLE
3	2	0800798	REAR OUTER CONTROL HANDLE
4	2	0800797	REAR INNER CONTROL HANDLE
5	2	0800795	FWD, INNER CONTROL HANDLE
6	2	0800796	FWD, OUTER CONTROL HANDLE
7	2	0301720	KNOB, BALL
8	6	0300341	KNOB
9	2	0300834	KNOB, "IN-OUT" RED (CABLE)
10	10	0400393	NUT, 3/8" - 16 JAM
11	4	0400541	COTTER PIN, 1/16" x 3/4" LG.
12	2	0705242	CONTROL HANDLE PIVOT ROD
13	15	0400532	CLEVIS PIN, 5/16" DIA. x 1" LG.
14	10	0400465	WASHER, 5/16" FLAT
15	10	0400121	SCREW, 3/8" - 16 x 3/4" HEX HEAD
16	5	0400482	LOCKWASHER, 3/8" HELICAL
17	8	0400392	NUT, 3/8" - 16 NYLON LOCK
18	4	0400243	NUT, 3/8" - TINNEMAN "J"
19	5	0800800	CONTROL ROD LINK
20	4	0800799	VALVE SHIFTER
21	2	0801566	CONTROL HANDLE, CENTER
22	10	0400543	COTTER PIN, 1/8" x 3/4" LG.
23	3	0400140	SCREW, 3/8" - 16 x 4" LG. HEX HD.
24	1	0805036	CONTROL ROD LINK, ANTI TILT

# SECTION I - PARTS HYDRAULIC WINCH

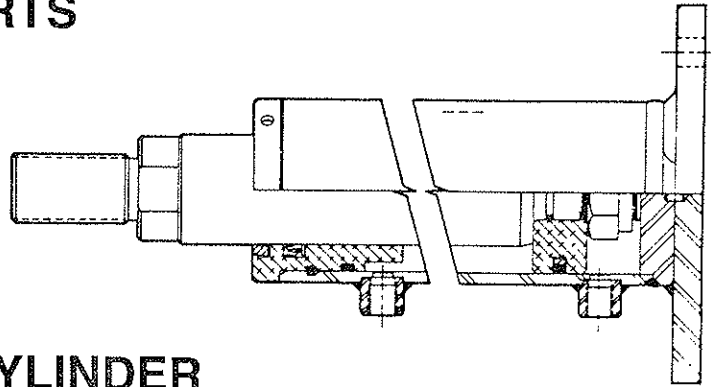


# SECTION 1 - PARTS HYDRAULIC WINCH

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0300261	LEVER
2	1	0300448	KEY
3	1	0300449	SCREW
4	1	0300450	KEY
5	1	0300451	SHAFT
6	1	0300452	CLUTCH HOUSING
7	1	0300398	YOKE
8	1	0300399	SCREW
9	5	0300453	BUSHING
10	1	0300454	SCREW
11	1	0300455	SPRING
12	1	0300456	BALL
13	1	—	CLUTCH
14	1	0300458	SPACER
15	1	0300381	DRUM
16	2	0300459	PLUG
17	1	0300460	HOUSING
18	1	0300461	PLUG
19	1	0300462	REDUCER
20	1	0300463	DRAG BRAKE
21	1	0300464	SPRING
22	16	0300465	SCREW
23	1	0300466	CAP
24	2	0300447	GASKET
25	2	0300467	BEARING
26	1	0300468	WORM
27	1	0300695	SCREW
28	1	0300694	CAP. ADAPTOR
29	1	0300471	SEAL
30*	2	—	KEY
31*	1	—	SHAFT
32*	2	—	KEY
33	1	0300472	HUB
34	1	0300473	GEAR
35	6	0300474	WASHER
36	6	0300475	SCREW
37	1	0300476	GASKET
38	1	0300477	COVER
39	4	0300569	SCREW
40	1	0300290	COUPLING

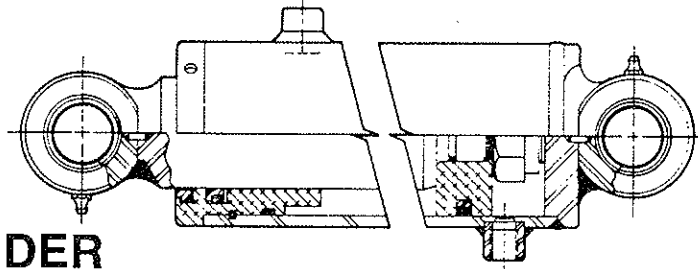
\*When ordering specify winch serial number.

# SECTION I - PARTS CYLINDERS



## BED EXTEND CYLINDER

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0301970	BED EXTEND CYLINDER (COMPLETE)
2	—	0304219	SEAL KIT



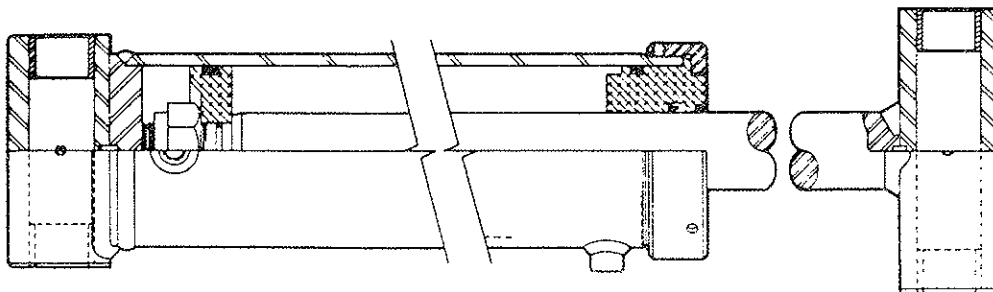
## BED TILT CYLINDER

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	2	0301796	BED TILT CYLINDER (COMPLETE)
2	—	0304219	SEAL KIT



## WHEEL LIFT EXTEND CYLINDER

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0302178	HYDRAULIC CYLINDER, EXTEND (COMPLETE)
2	1	0304086	SEAL KIT, EXTEND CYLINDER



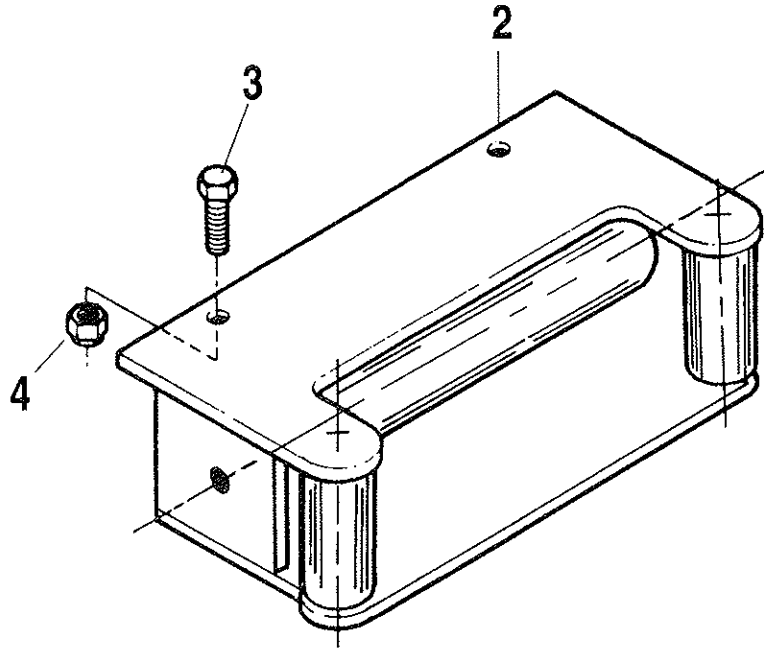
## WHEEL LIFT CYLINDER

REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0301484	HYDRAULIC CYLINDER LIFT (COMPLETE)
2	1	0304181	SEAL KIT, LIFT CYLINDER



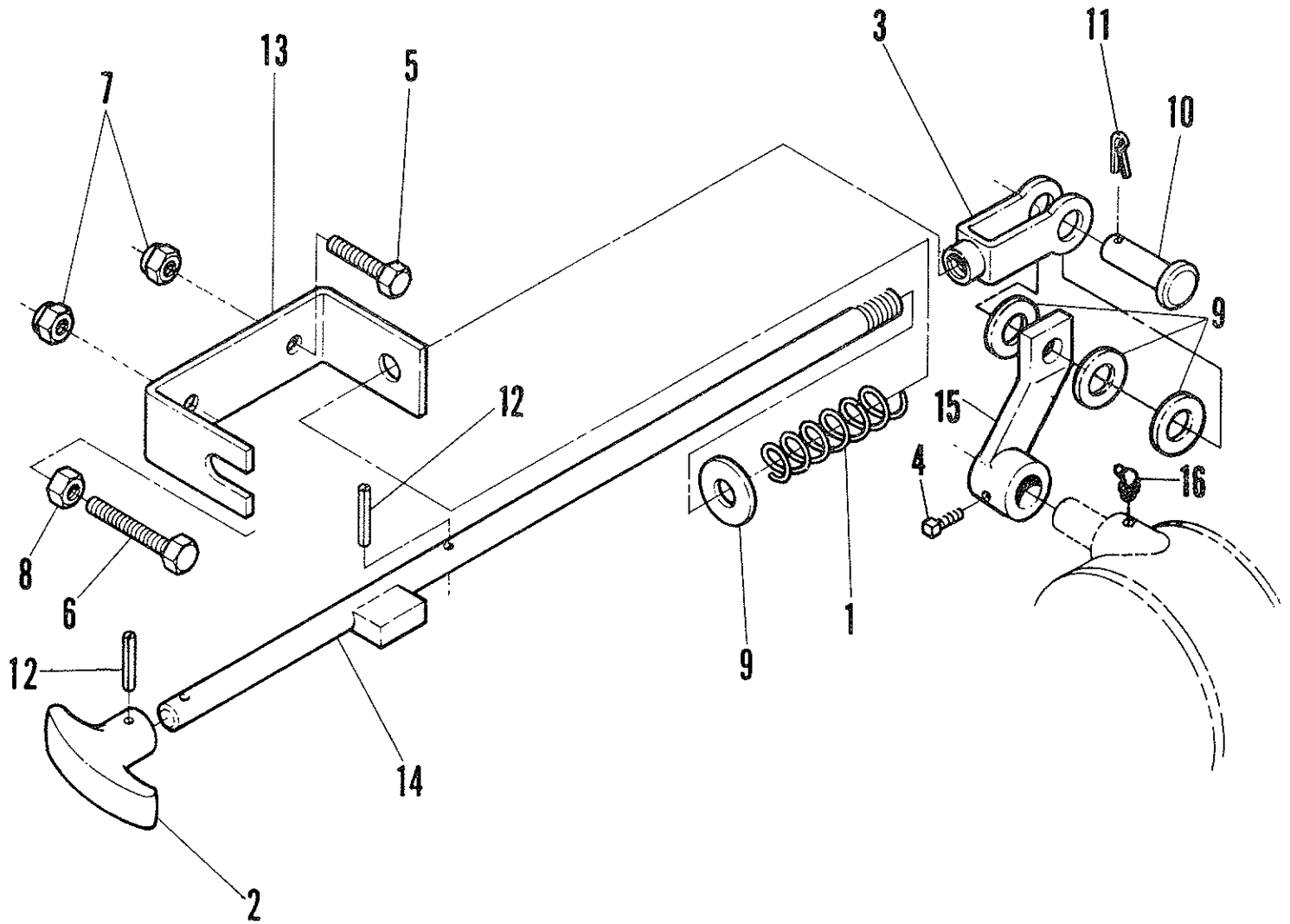
# SECTION 1 - OPTIONAL EQUIPMENT

## CABLE ROLLER ASS'Y



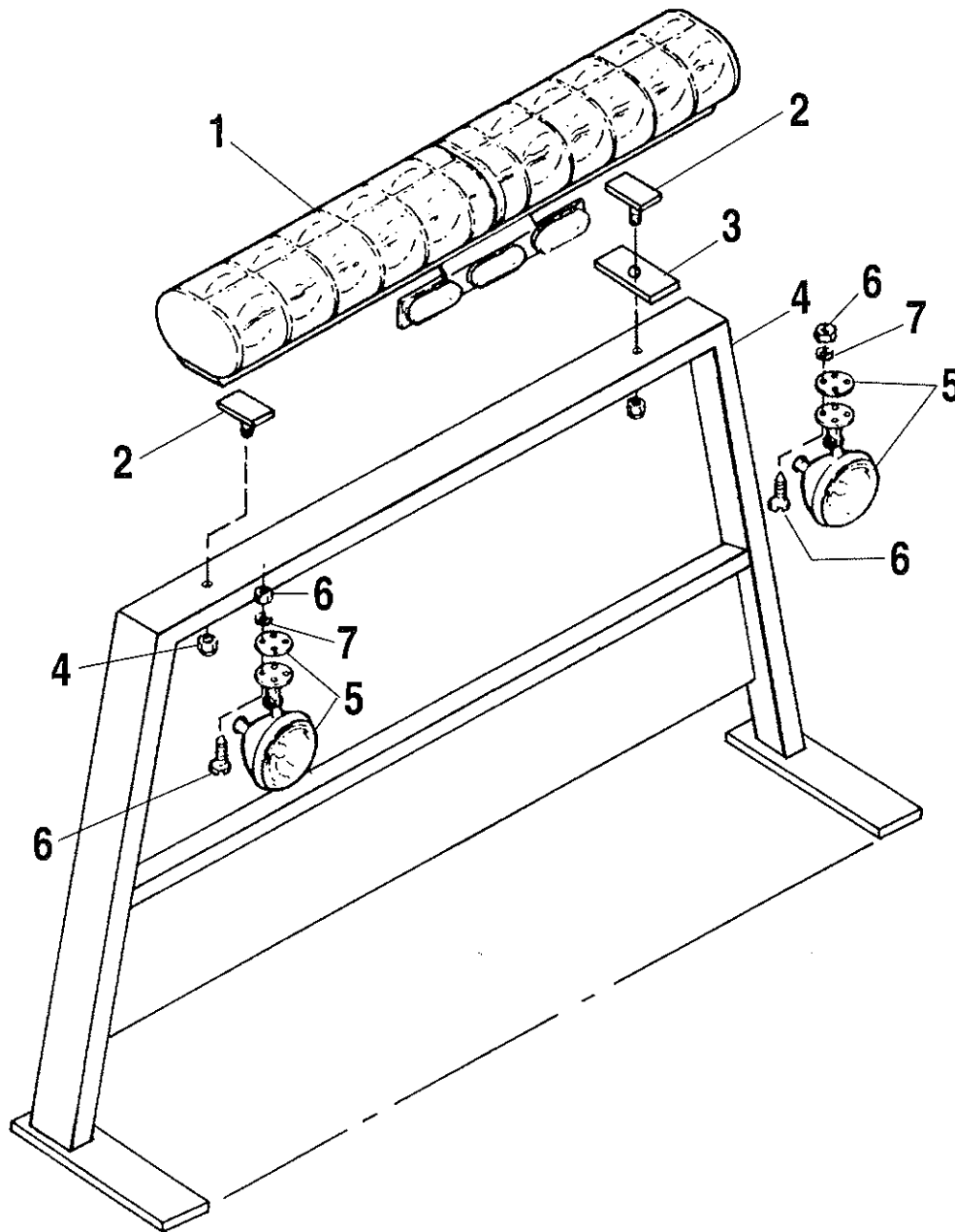
REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	—	0900892	CABLE ROLLER ASS'Y
2	1	0805037	CABLE ROLLER GUIDE WELDMENT
3	2	0400177	SCREW, 1/2" - 13 x 1-1/4" HEX HEAD
4	2	0400408	NUT, 1/2" - 13 NYLON LOCK

# SECTION I - OPTIONAL EQUIPMENT WINCH CLUTCH CONTROL



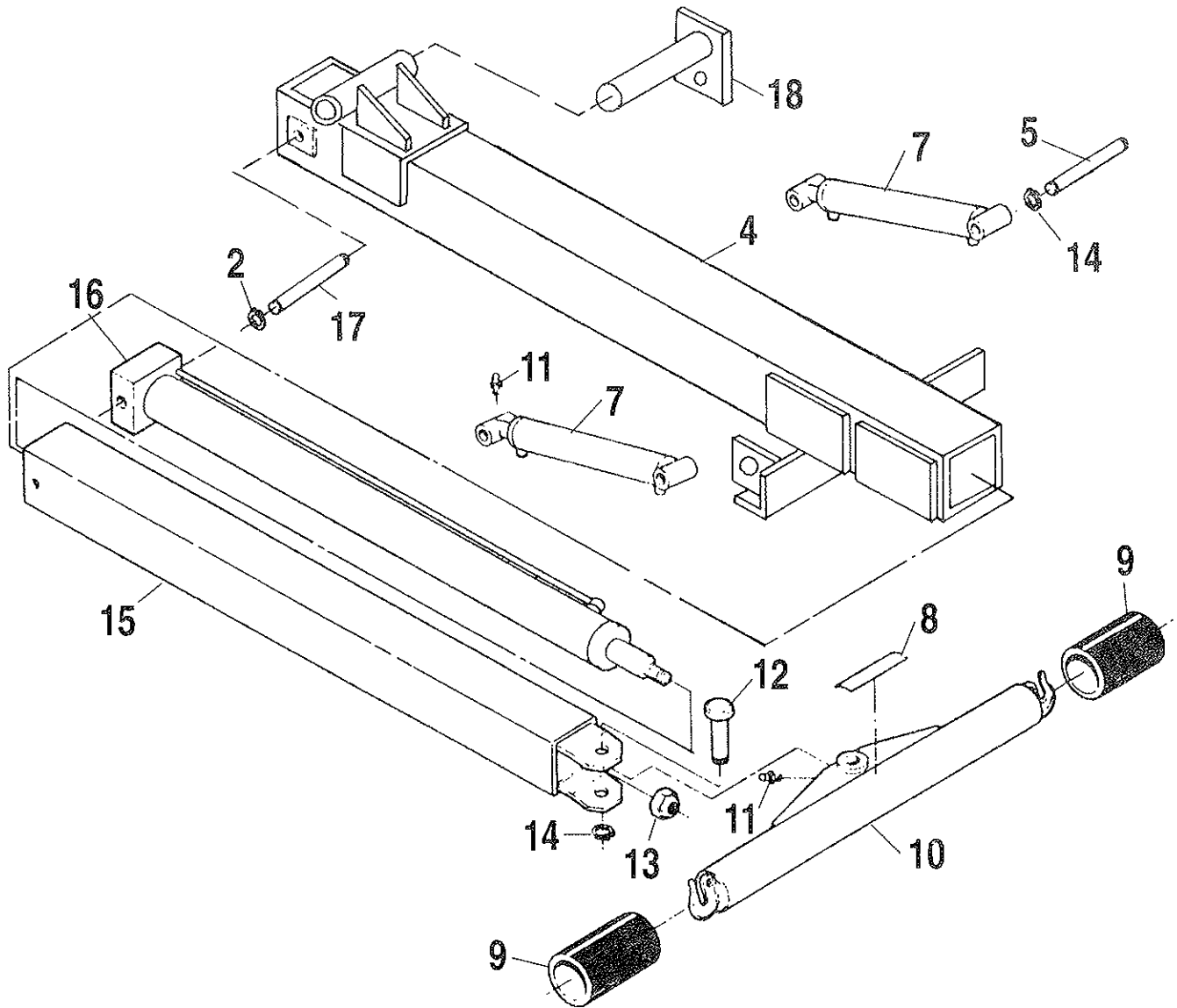
REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0300845	SPRING, COMPRESSION
2	1	0301532	"T" HANDLE
3	1	0301588	ADJUSTING YOKE
4	1	0400116	SCREW, 5/16" - 18 x 1/2" LG. SQ. HD. SET
5	1	0400126	SCREW, 3/8" - 16 x 1" LG. HEX. HD. CAP
6	1	0400150	SCREW, 3/8" - 16 x 2 1/2" LG. HEX. HD. CAP
7	2	0400392	NUT, 3/8" - 16 NYLON LOCK
8	1	0400393	NUT, 3/8" - 16 JAM
9	4	0400492	WASHER, 1/2" FLAT
10	1	0400537	PIN, 1/2" DIA. x 1-1/2" LG. CLEVIS
11	1	0400546	PIN, 1/8" x 1-1/4" LG. COTTER
12	2	0400560	PIN, 5/32" x 1" LG. ROLL
13	1	0702408	MOUNTING CHANNEL
14	1	0800780	CONTROL ROD, SINGLE WINCH
15	1	0801270	WELDMENT, BELL CRANK
16	1	0301397	GREASE FITTING 90°

# SECTION I - OPTIONAL EQUIPMENT LIGHTING ACCESSORIES



REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0301359	WRECKER SPECIAL LIGHT
2	2	0800539	"T" BOLT ADAPTOR
3	2	0709872	RUBBER CUSHION
4	2	0400392	NUT, 3/8" - 16 NYLON LOCK
5	2	0300095	SPOTLIGHT W/GASKET
6	8	0400043	SCREW, #10 - 24 x 1" MACHINE
6	8	0400356	NUT, #10 NYLON LOCK
7	8	0400520	WASHER, #10 LOCK

# SECTION I - OPTIONAL EQUIPMENT INDEPENDENT TOW BAR ASSEMBLY

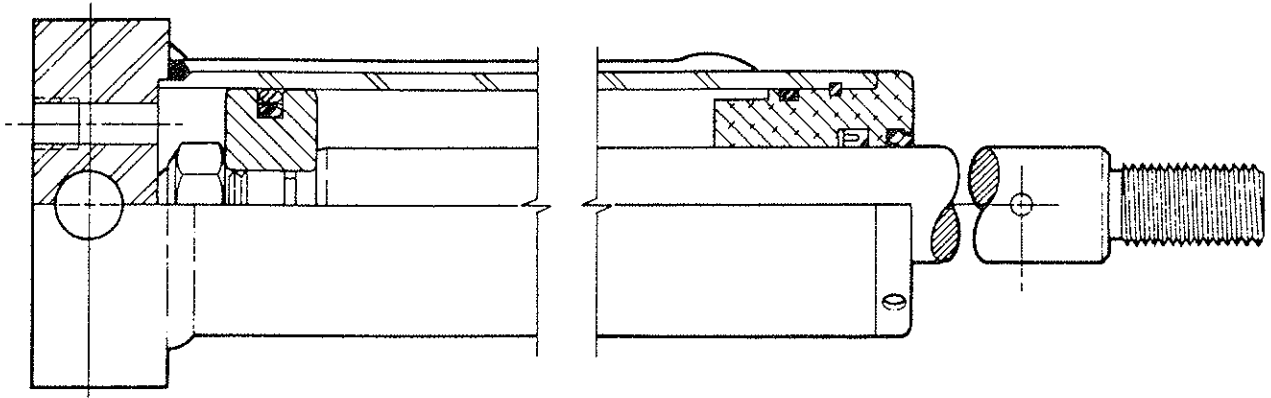


REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1			TOW BAR ASSEMBLY (COMPLETE)
2	2	0301381	SNAP RING, 3/4"
4	1	0802670	TUBE, TOW BAR OUTER
5	2	0702434	PIN, CYLINDER
7	2	0302368	CYLINDER, TOW BAR
8	1	0500241	DECAL, SAFETY CHAIN WARNING
9	2	0301723	GUARD, TOW BAR BUMPER
10	1	0800898	CROSSTUBE, TOW BAR
11	3	0300113	GREASE FITTING
12	1	0301424	PIN, CONNECTOR
13	1	0400436	NUT
14	4	0301642	SNAP RING, 1-1/4"
15	1	0800777	TUBE, TOW BAR INNER
16	1	0301632	CYLINDER, TOW BAR EXTEND
17	1	0702418	SHAFT, EXTEND CYLINDER
18	1	0805030	SHAFT, TOW BAR PIVOT, PIN WITH KEEPER



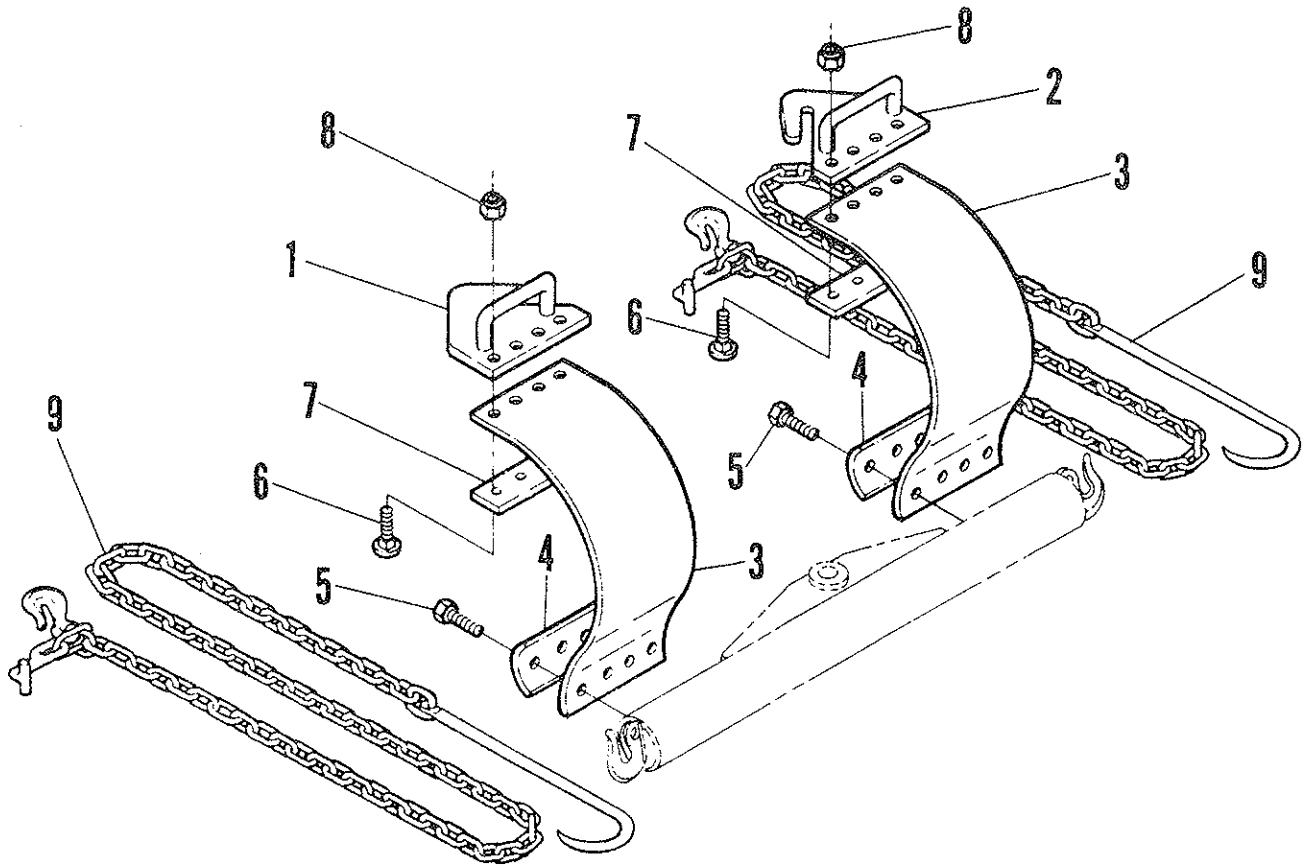
# SECTION I - OPTIONAL EQUIPMENT

## HYDRAULIC CYLINDER (TOW BAR)



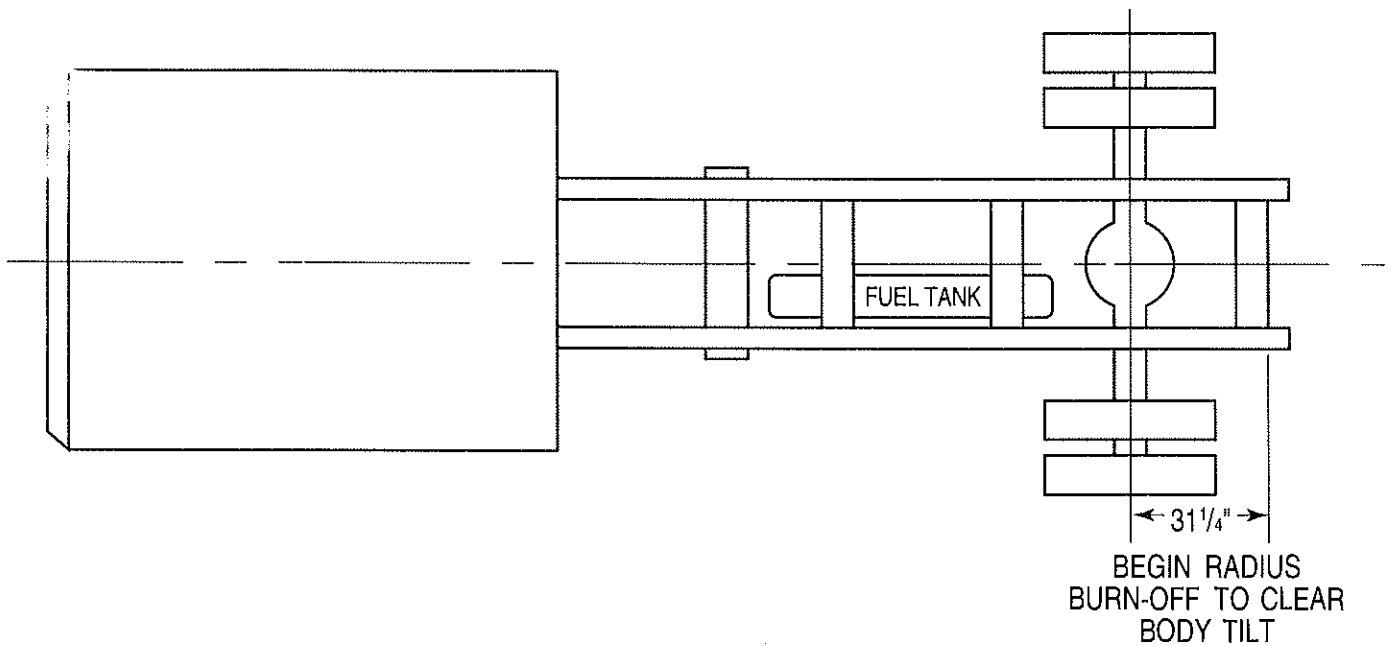
REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0301798	TOW BAR CYLINDER (COMPLETE)
2	—	0304220	SEAL KIT

# SECTION I - OPTIONAL EQUIPMENT TOWING SLING

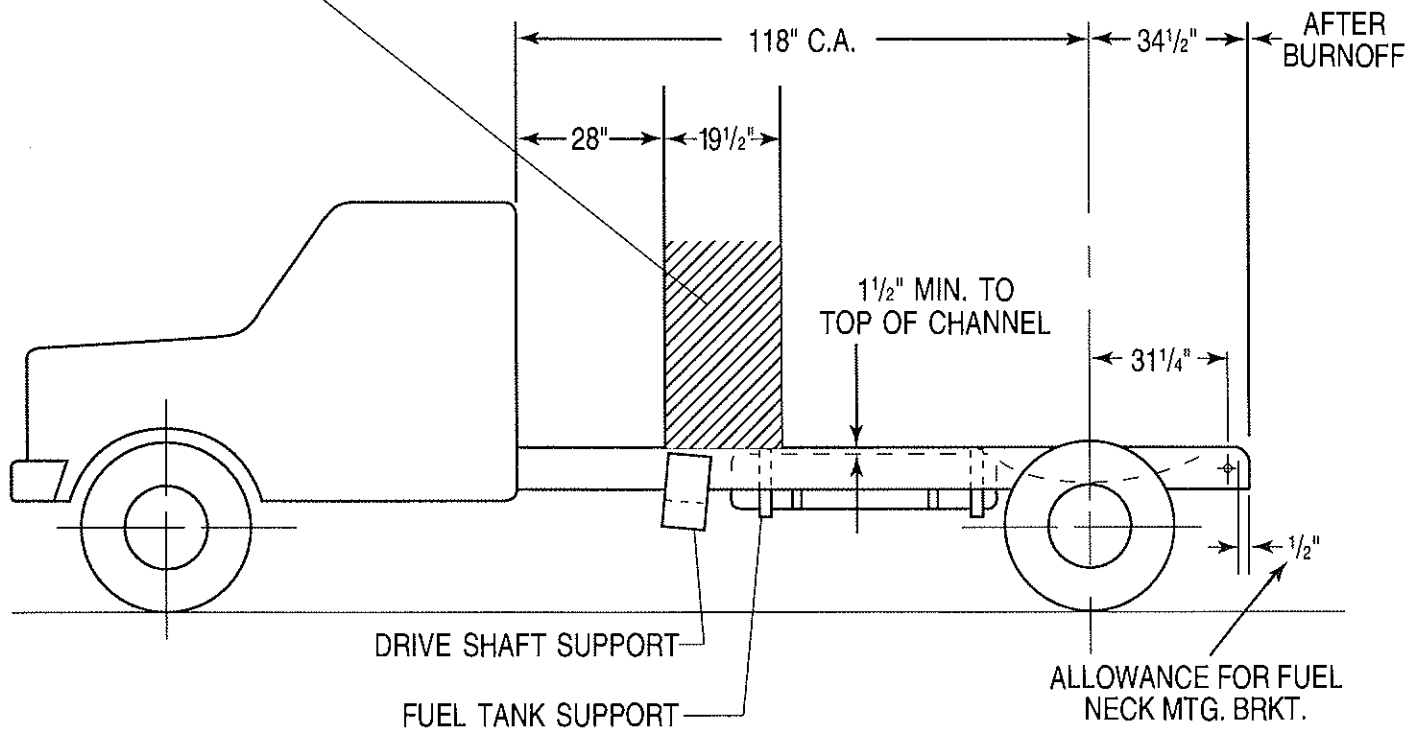


REF. NO.	NO. REQ'D.	PART NUMBER	DESCRIPTION
1	1	0800608	CHAIN KEEPER, LEFT
2	1	0800609	CHAIN KEEPER, RIGHT
3	2	0701919	TOW SLING BELT
4	2	0800873	BELT RETAINER
5	8	0400105	SCREW, 5/16" - 18 x 1-1/4" LG. SELF-TAPPING
6	8	0400156	CARRIAGE BOLT, 3/8" - 16 x 1-1/4" LG.
7	2	0701920	GRIP PLATE
8	8	0400392	NUT, 3/8" - 16 NYLON LOCK
9	2	0300176	"J" HOOK ASSEMBLY

# SECTION II - 19' CARRIER CHASSIS PREPARATION

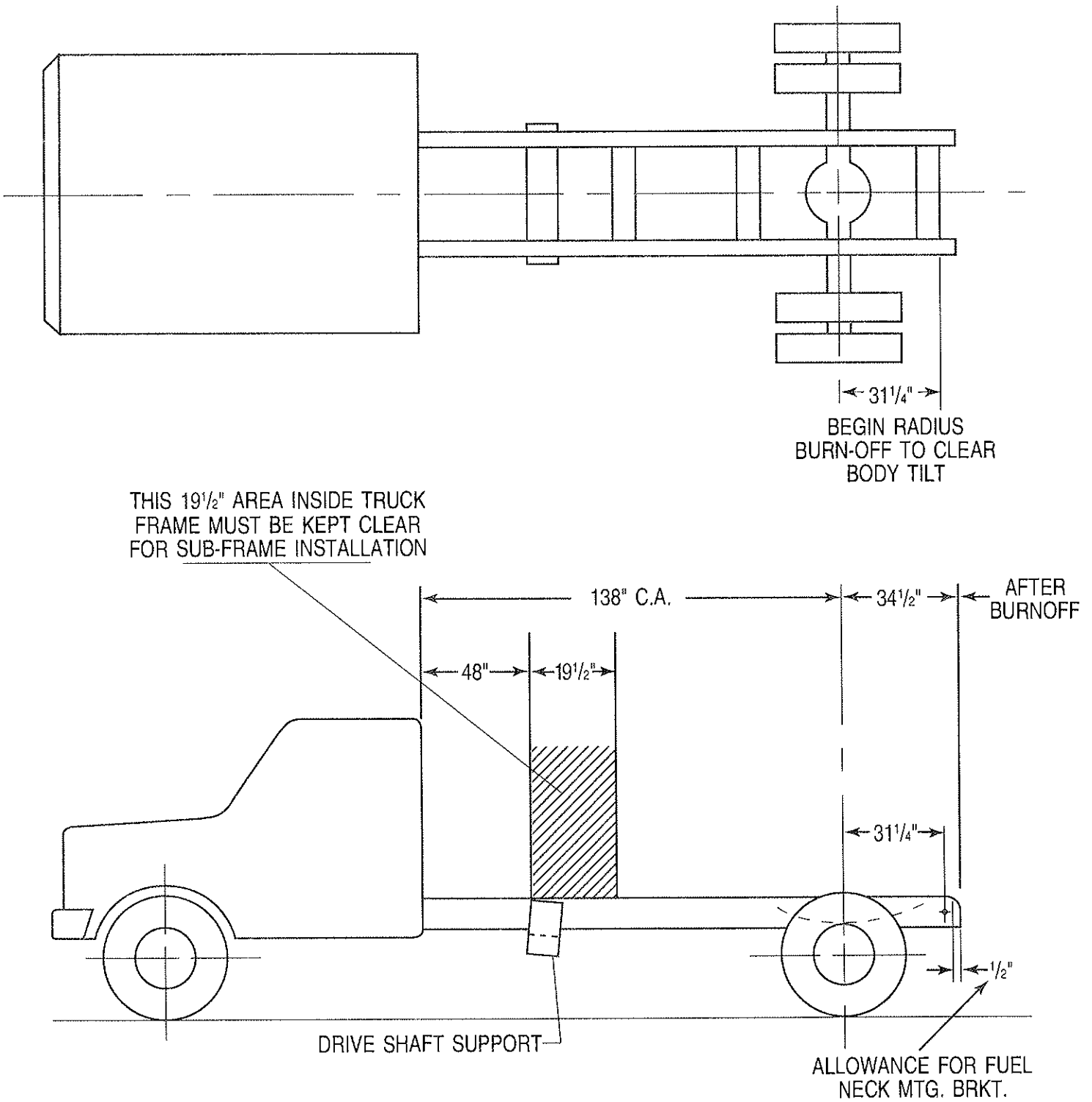


THIS 19 1/2" AREA INSIDE TRUCK  
FRAME MUST BE KEPT CLEAR  
FOR SUB-FRAME INSTALLATION



— CHASSIS PREPARATION —  
BEFORE SUBFRAME AND  
BODY INSTALLATION.

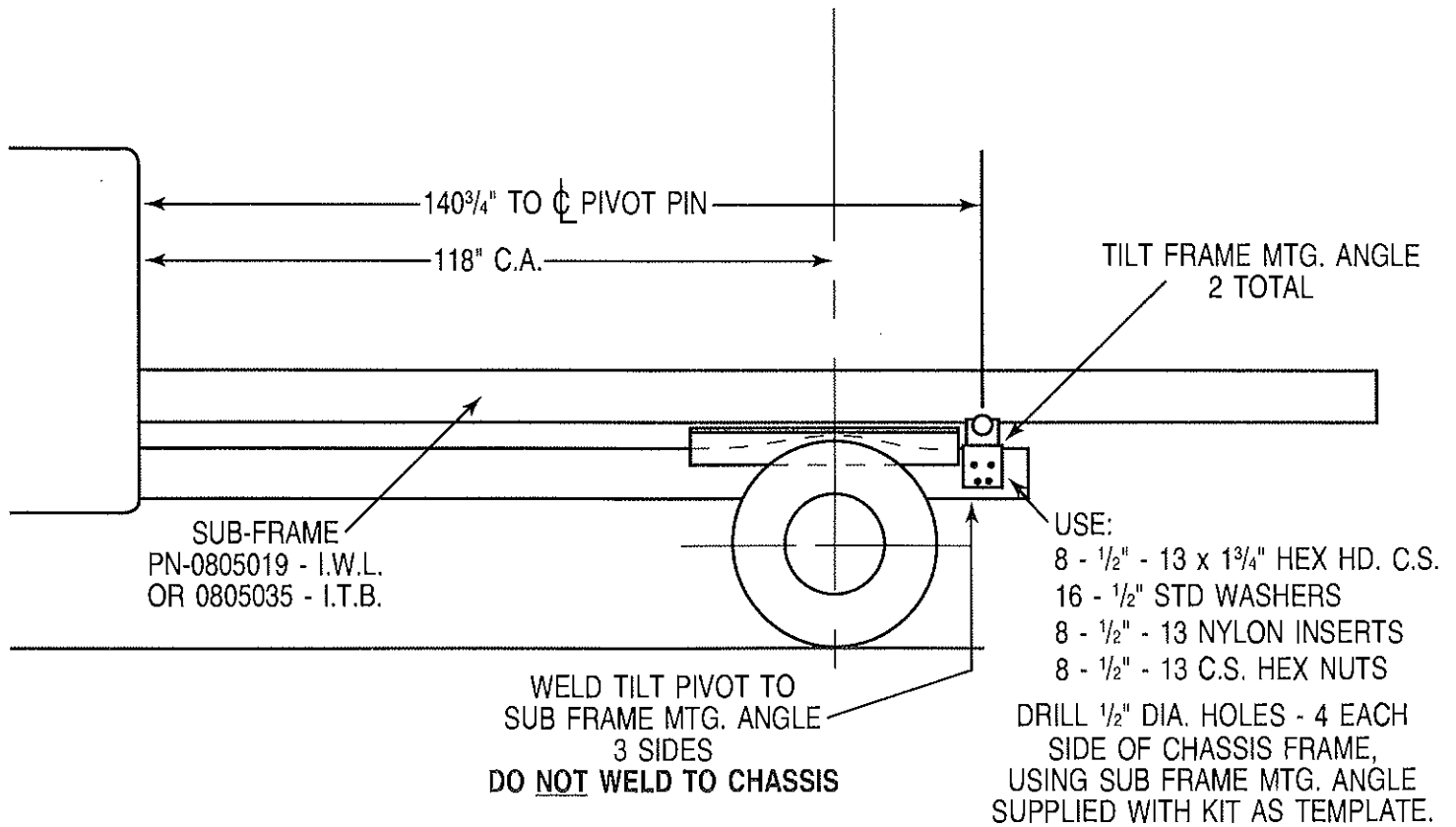
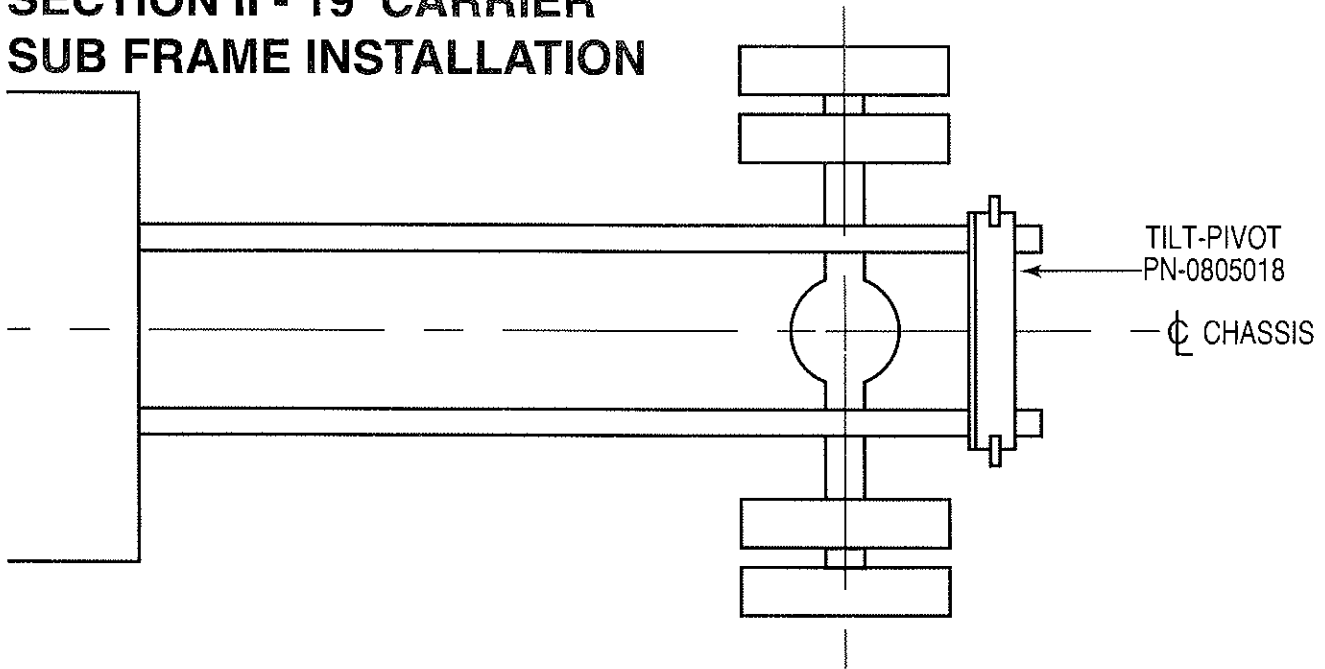
# SECTION II - 21' CARRIER CHASSIS PREPARATION



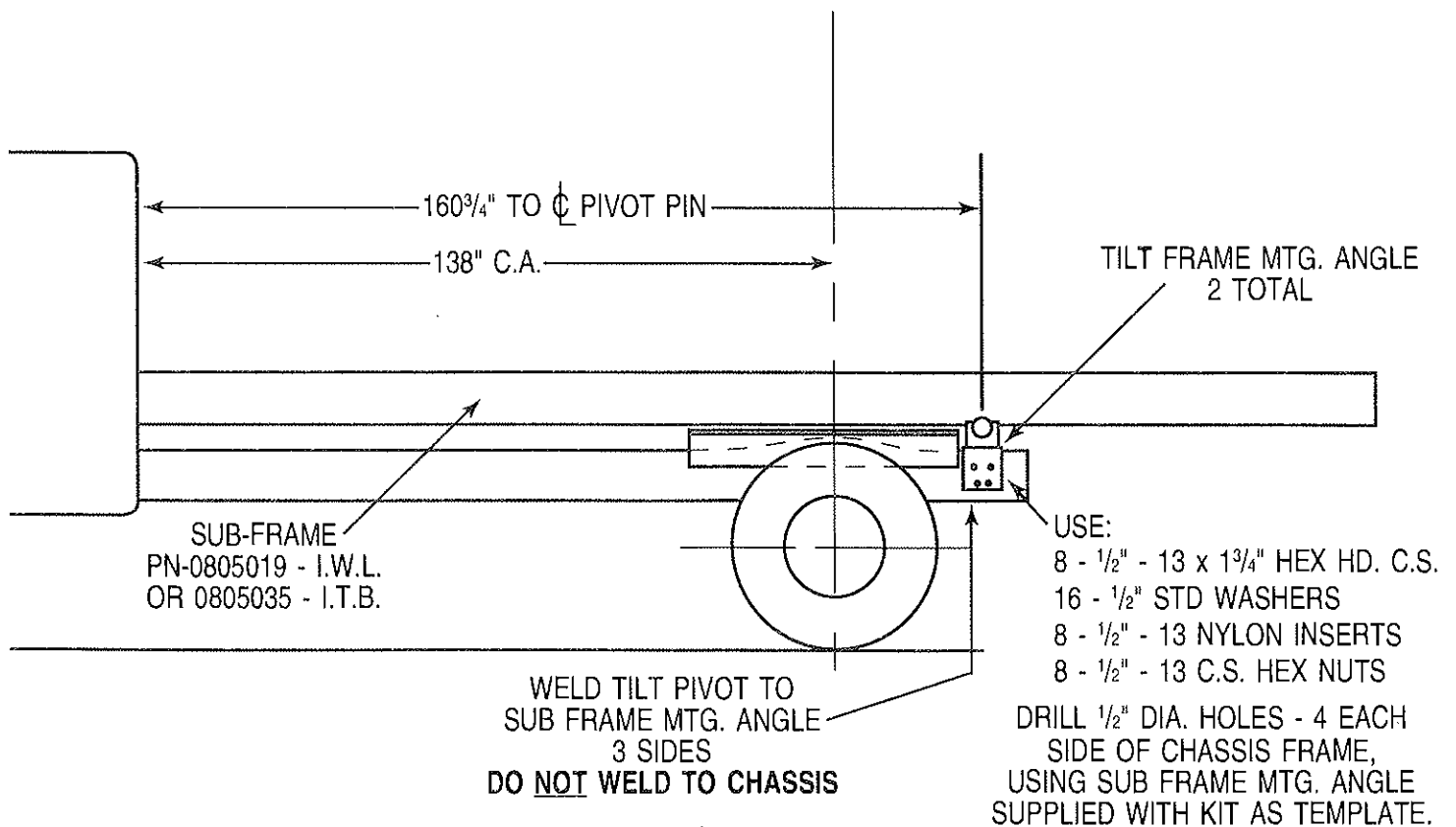
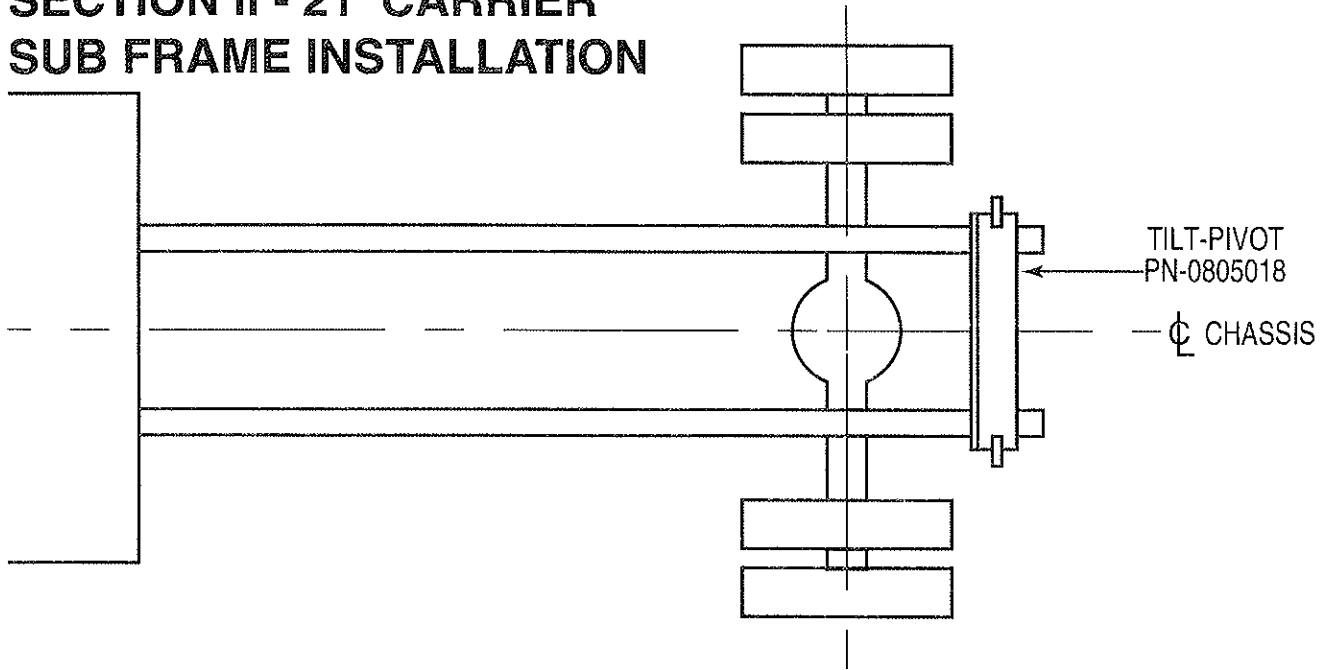
— CHASSIS PREPARATION —  
BEFORE SUBFRAME AND  
BODY INSTALLATION.



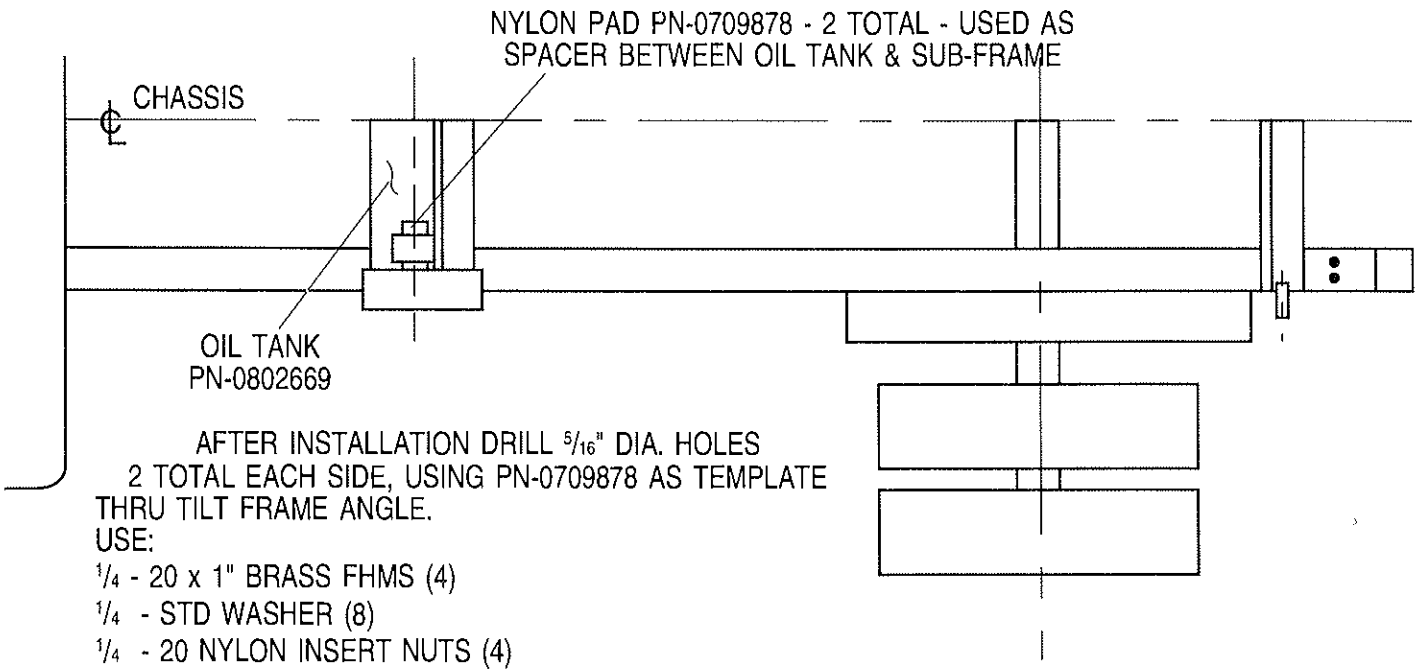
# SECTION II - 19' CARRIER SUB FRAME INSTALLATION



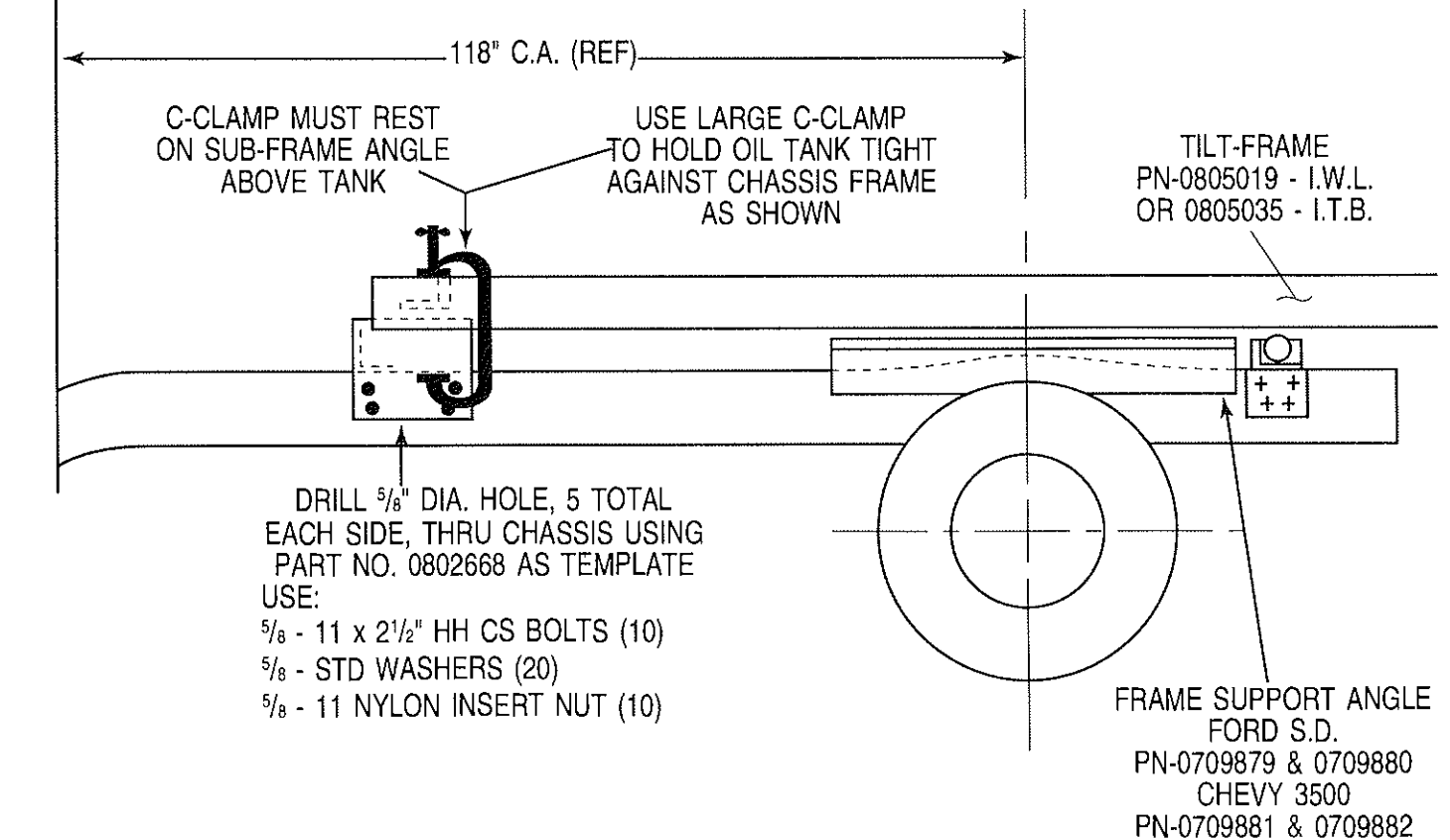
# SECTION II - 21' CARRIER SUB FRAME INSTALLATION



# SECTION II - 19' CARRIER OIL TANK INSTALLATION

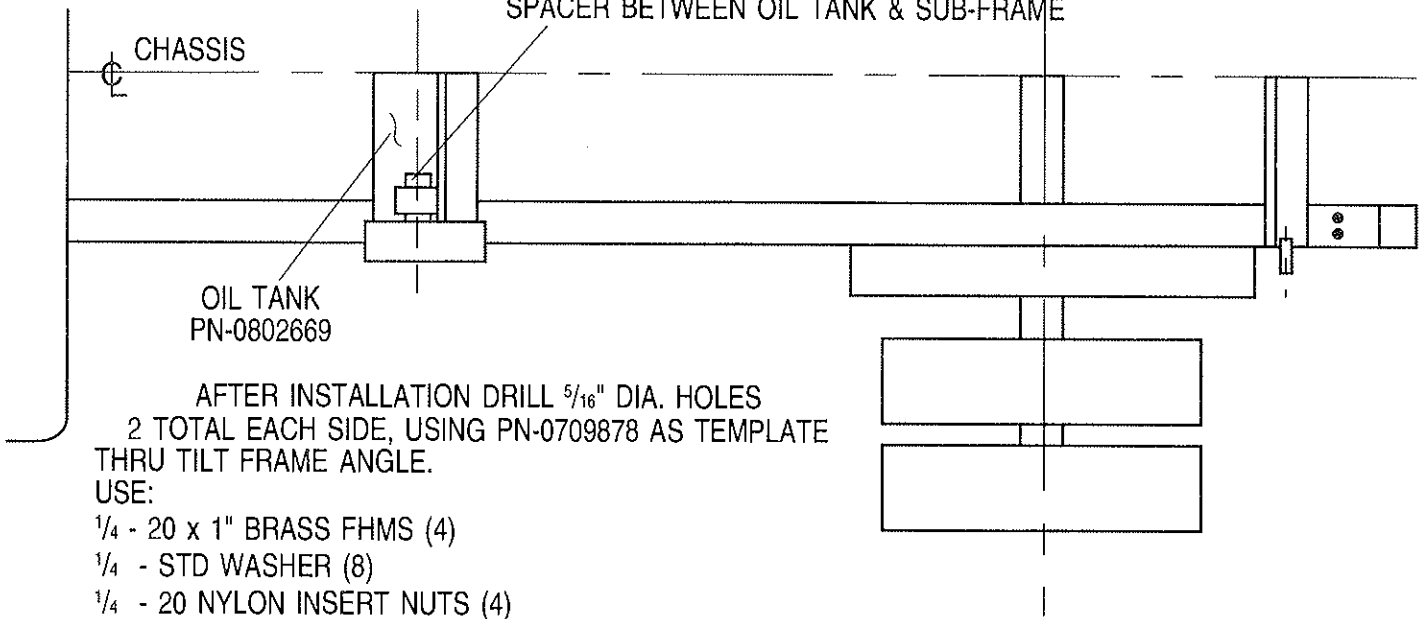


CAUTION NOTE: NYLON PADS (PN-0709878) TO BE  
INSTALLED ONLY AFTER OIL TANK HAS BEEN PROPERLY  
LOCATED AND MOUNTED - WITH NO CYLINDER EXTENDED.

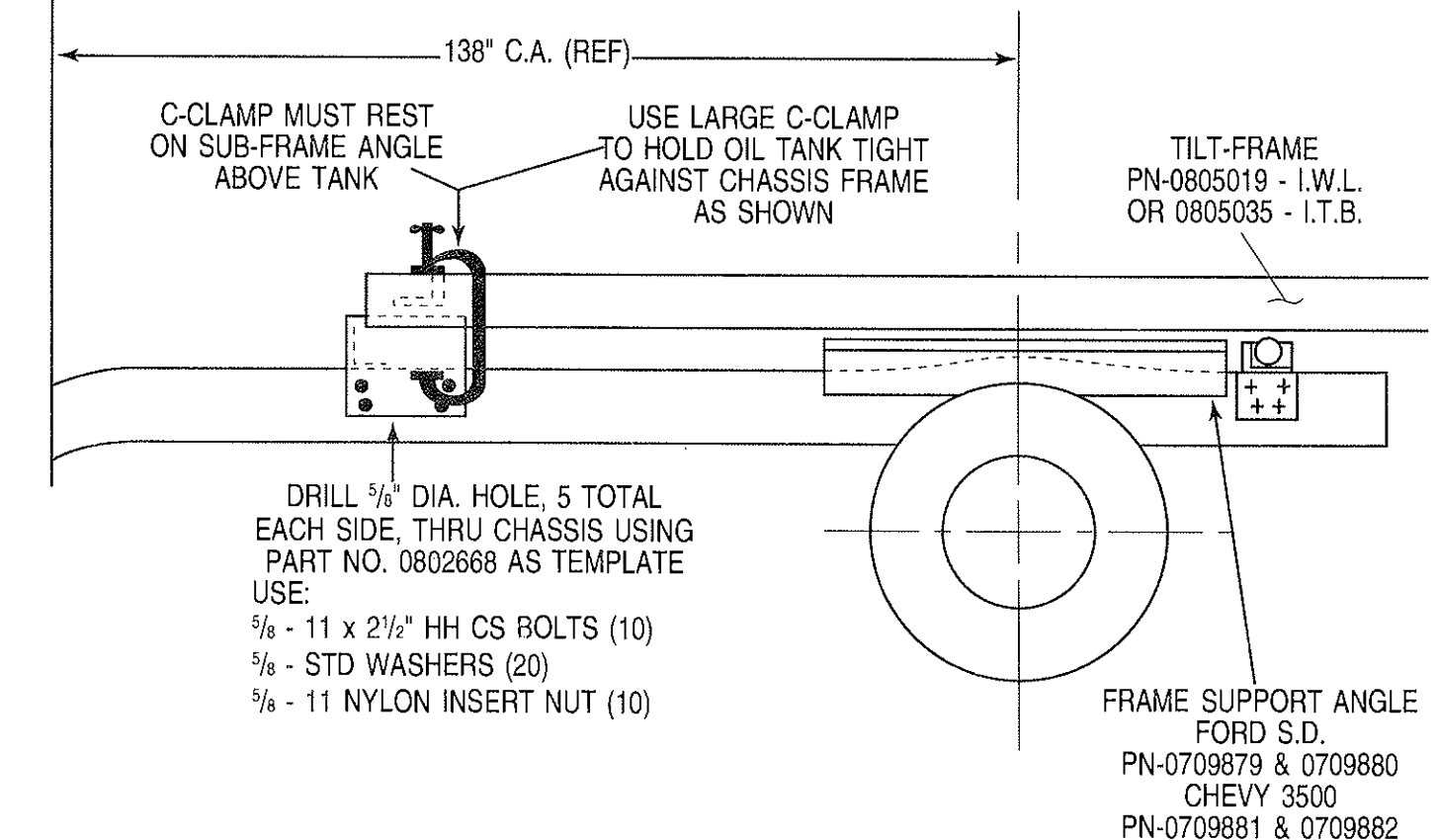


# SECTION II - 21' CARRIER OIL TANK INSTALLATION

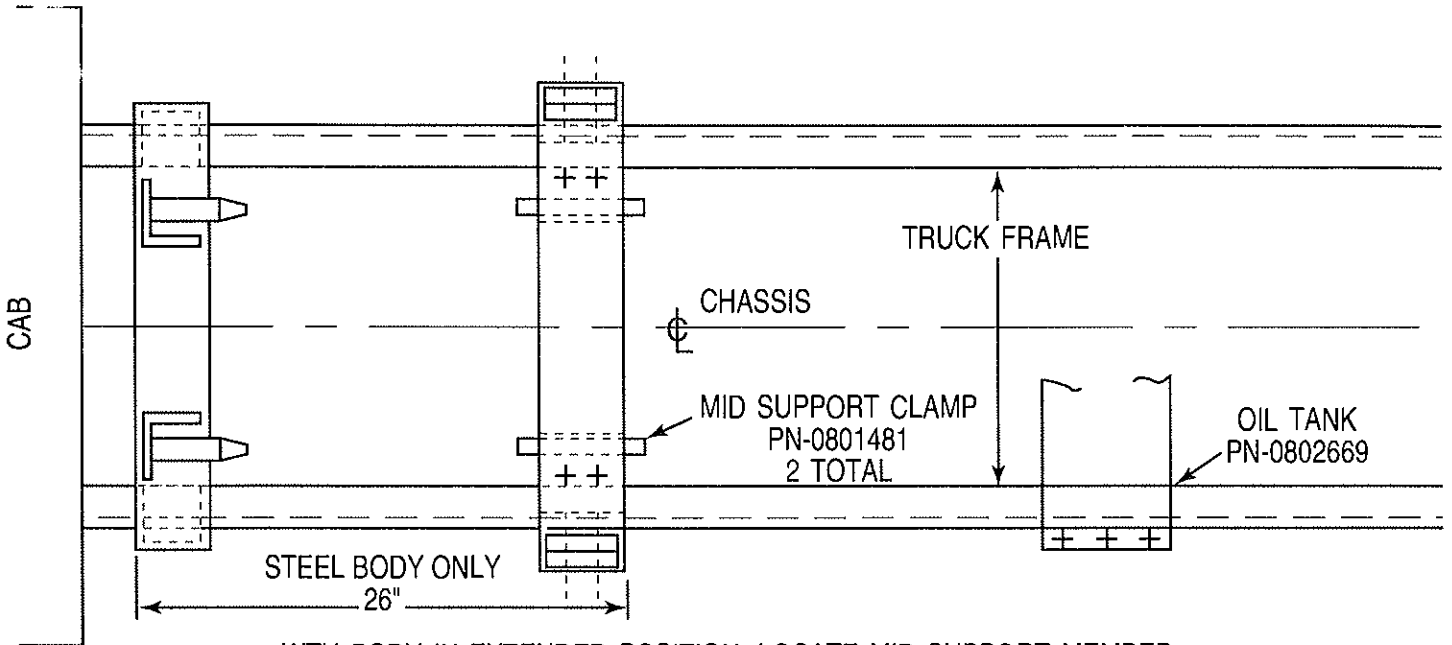
NYLON PAD PN-0709878 - 2 TOTAL - USED AS  
SPACER BETWEEN OIL TANK & SUB-FRAME



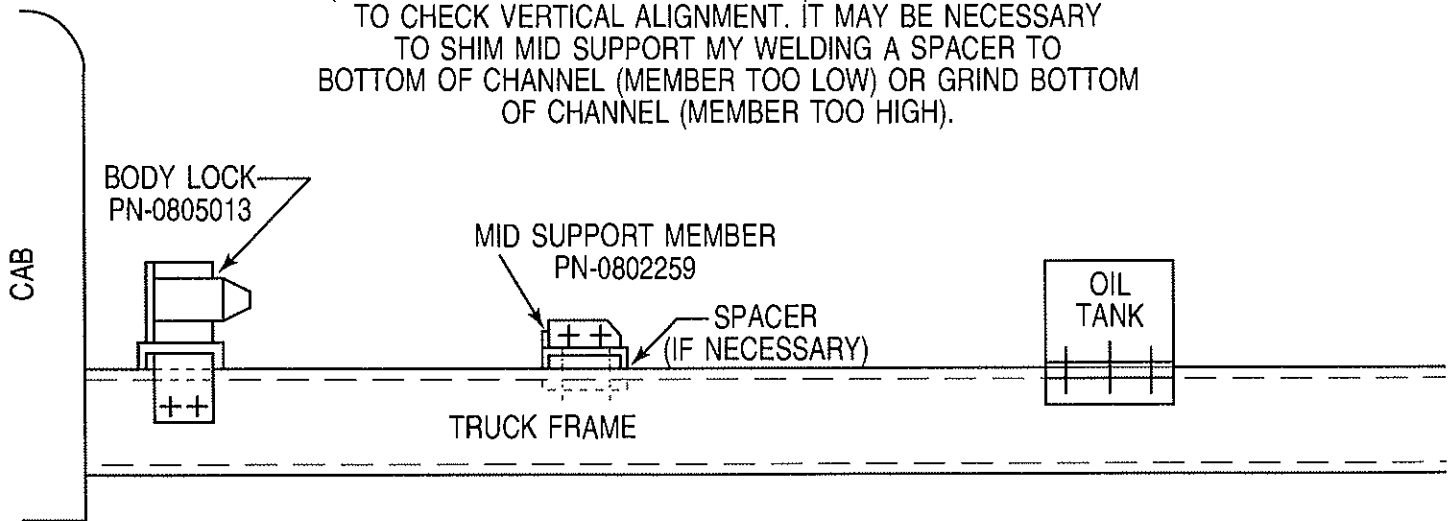
CAUTION NOTE: NYLON PADS (PN-0709878) TO BE  
INSTALLED ONLY AFTER OIL TANK HAS BEEN PROPERLY  
LOCATED AND MOUNTED - WITH NO CYLINDER EXTENDED.



# SECTION II - 21' CARRIER MID SUPPORT MEMBER INSTALLATION

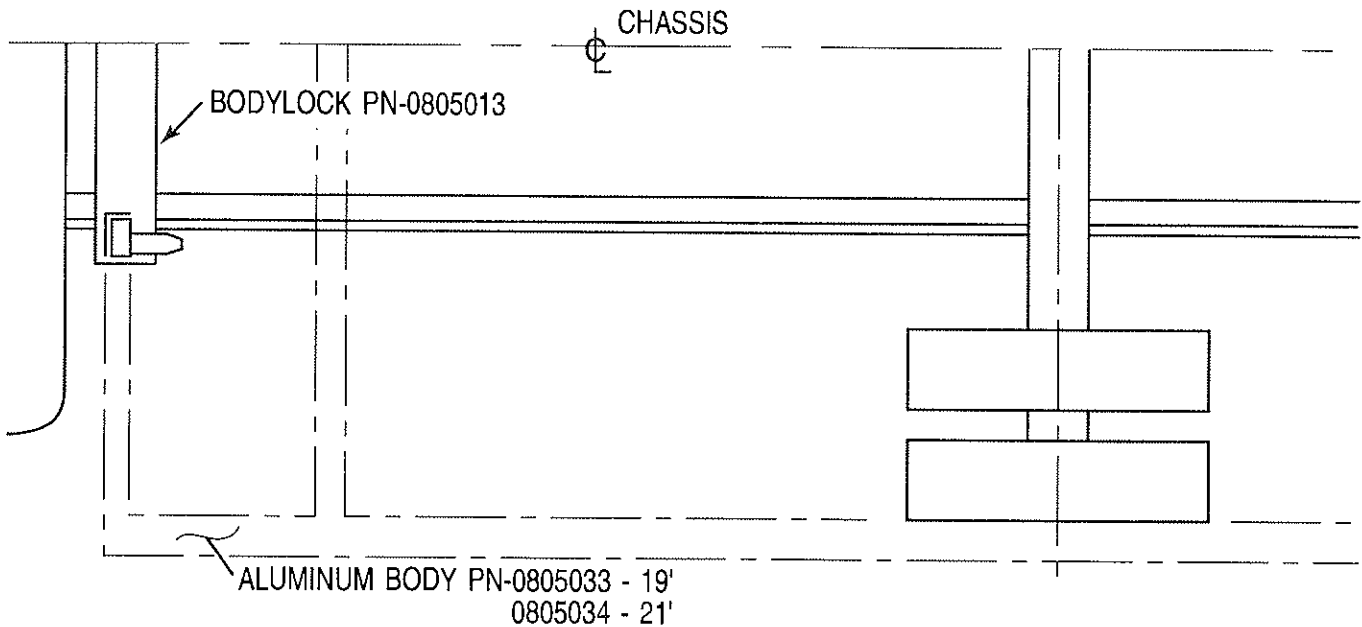


WITH BODY IN EXTENDED POSITION, LOCATE MID SUPPORT MEMBER APPROXIMATELY MIDWAY BETWEEN BEDLOCK & OIL TANK. (LOCATE TO CLEAR CROSS MEMBER). SLIDE BODY FORWARD TO CHECK VERTICAL ALIGNMENT. IT MAY BE NECESSARY TO SHIM MID SUPPORT BY WELDING A SPACER TO BOTTOM OF CHANNEL (MEMBER TOO LOW) OR GRIND BOTTOM OF CHANNEL (MEMBER TOO HIGH).



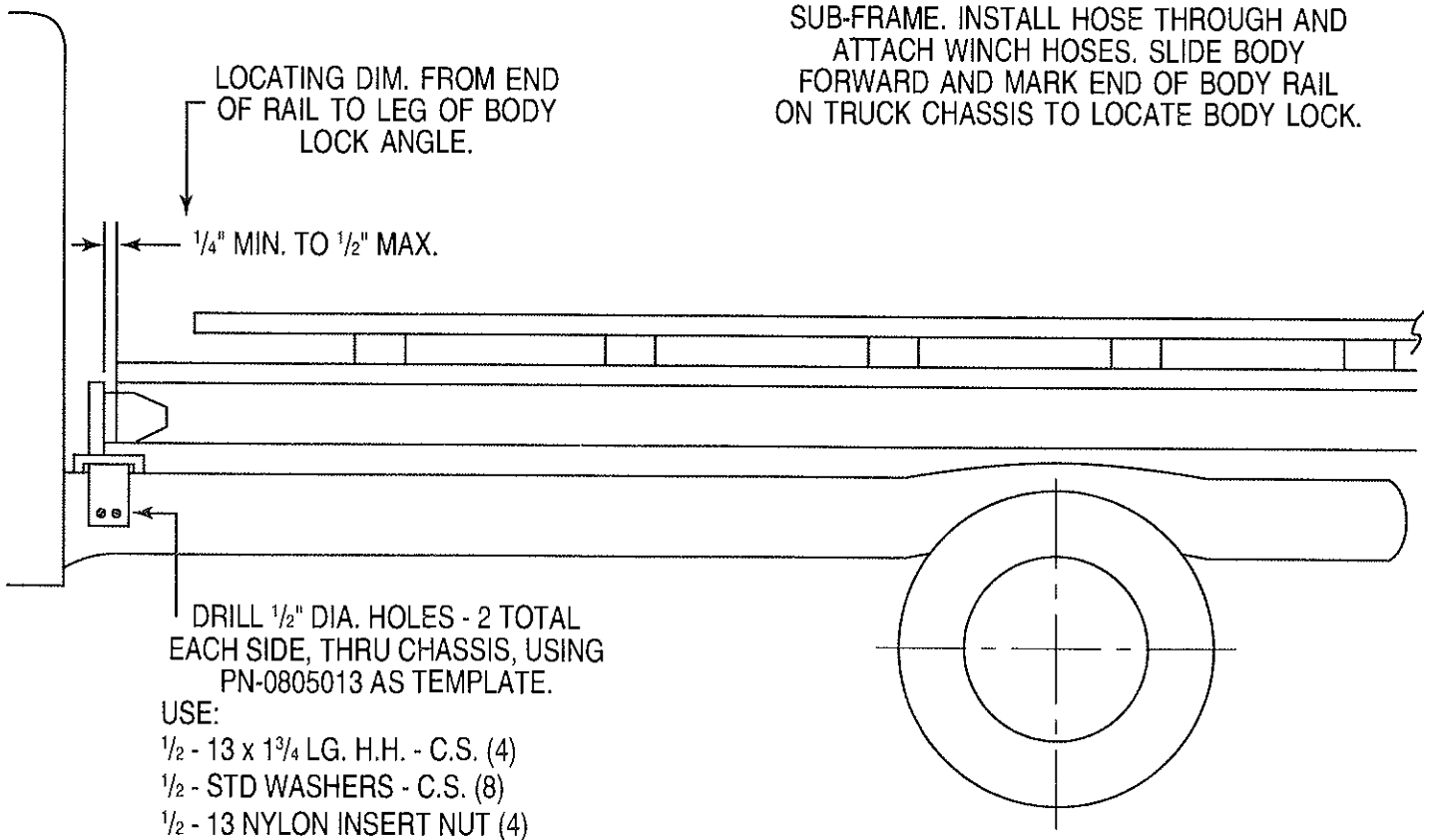
NOTE ON STEEL BODY  
MID SHIP MEMBER  
MAXIMUM DISTANCE FROM  
BODYLOCK IS 26".

# SECTION II - FORD SUPER DUTY CARRIER BODYLOCK INSTALLATION



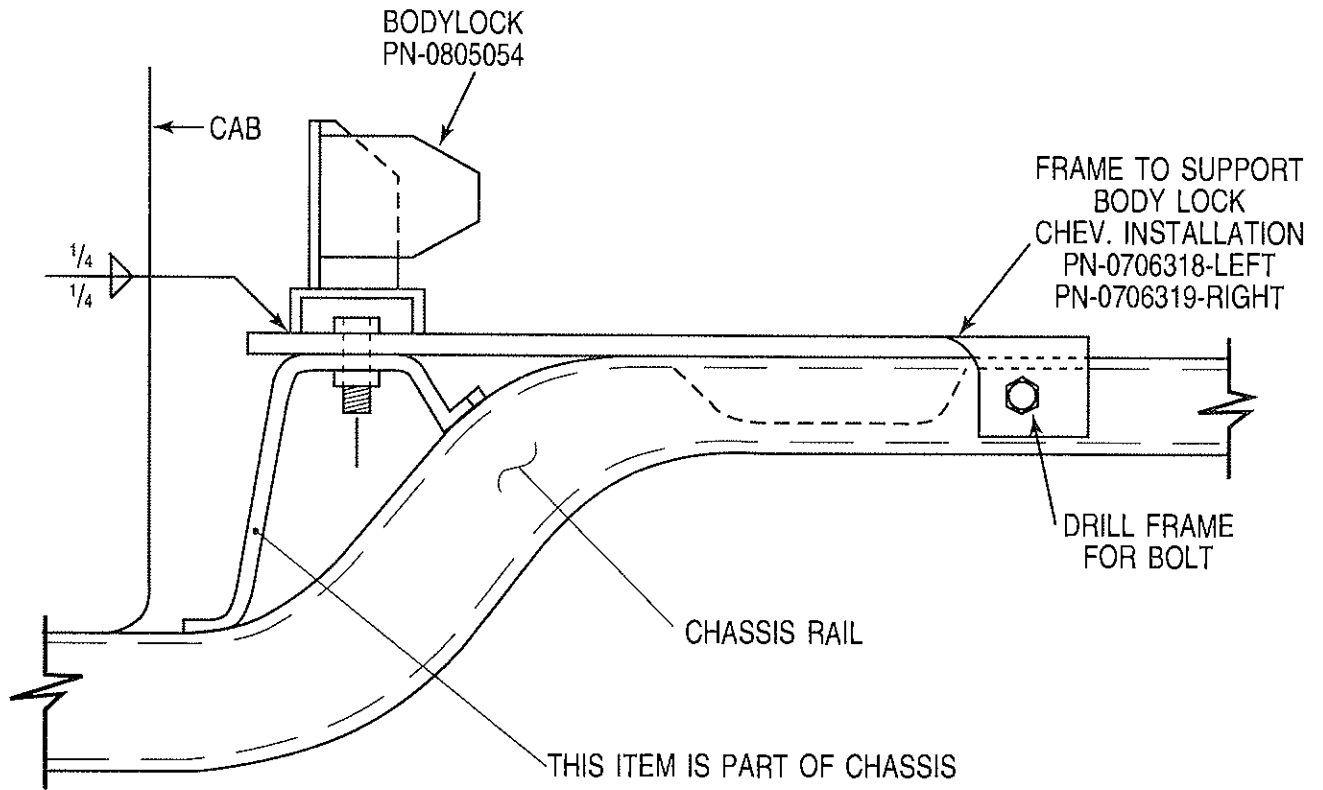
**CAUTION NOTE:**  
WINCH HOSES MUST LAY FLAT  
IN HOSE TRAY TO PREVENT HOSE  
DAMAGE WHEN INSTALLING BODY  
TO SUB-FRAME.

**BODYLOCK INSTALLATION**  
AFTER SLIDING BODY ONTO SUB-FRAME  
AND ATTACHING CYLINDER TO BODY,  
TIGHTEN OTHER END OF CYLINDER AT  
SUB-FRAME. INSTALL HOSE THROUGH AND  
ATTACH WINCH HOSES. SLIDE BODY  
FORWARD AND MARK END OF BODY RAIL  
ON TRUCK CHASSIS TO LOCATE BODY LOCK.





# SECTION II - CHEVY 3500 & HD3500 ONLY



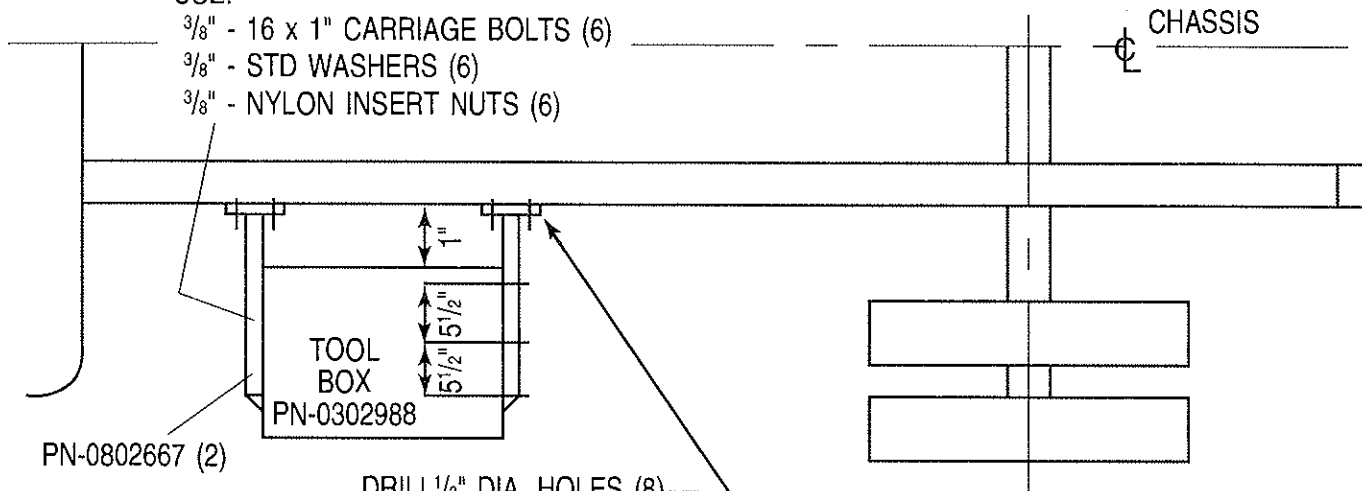
# SECTION II - 19' OR 21' CARRIER TOOL BOX MOUNTING

DRILL  $\frac{7}{16}$ " DIA. HOLES (6) THRU BOX  
USE:

$\frac{3}{8}$ " - 16 x 1" CARRIAGE BOLTS (6)

$\frac{3}{8}$ " - STD WASHERS (6)

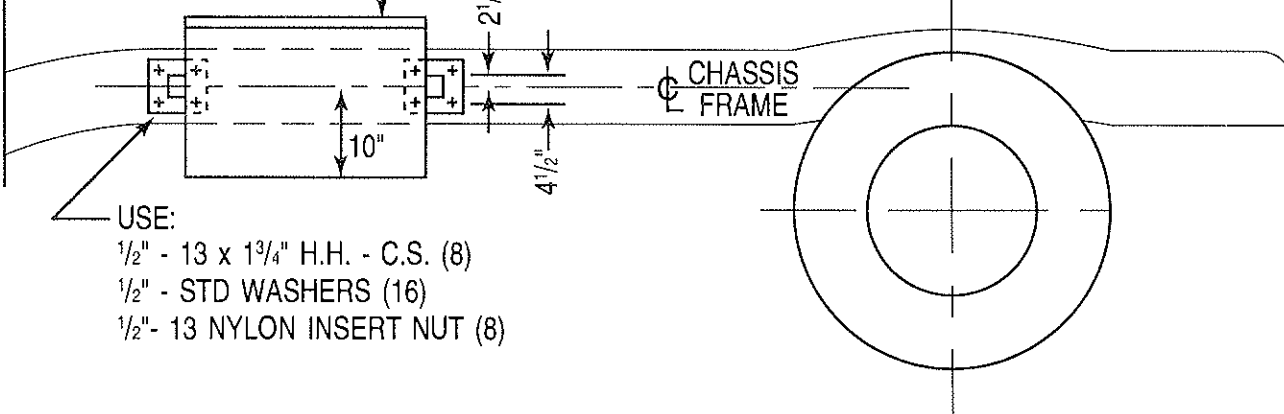
$\frac{3}{8}$ " - NYLON INSERT NUTS (6)



DRILL  $\frac{1}{2}$ " DIA. HOLES (8)  
USING TOOL BOX  
AS TEMPLATE AFTER  
ASSEMBLING MOUNTING  
BRACKETS TO TOOL BOX.

• CAUTION NOTE •  
CHECK FOR CLEARANCE  
BETWEEN TOOL BOX AND  
BODY BEFORE DRILLING  
HOLES IN TRUCK CHASSIS.

18"  
APPROX.



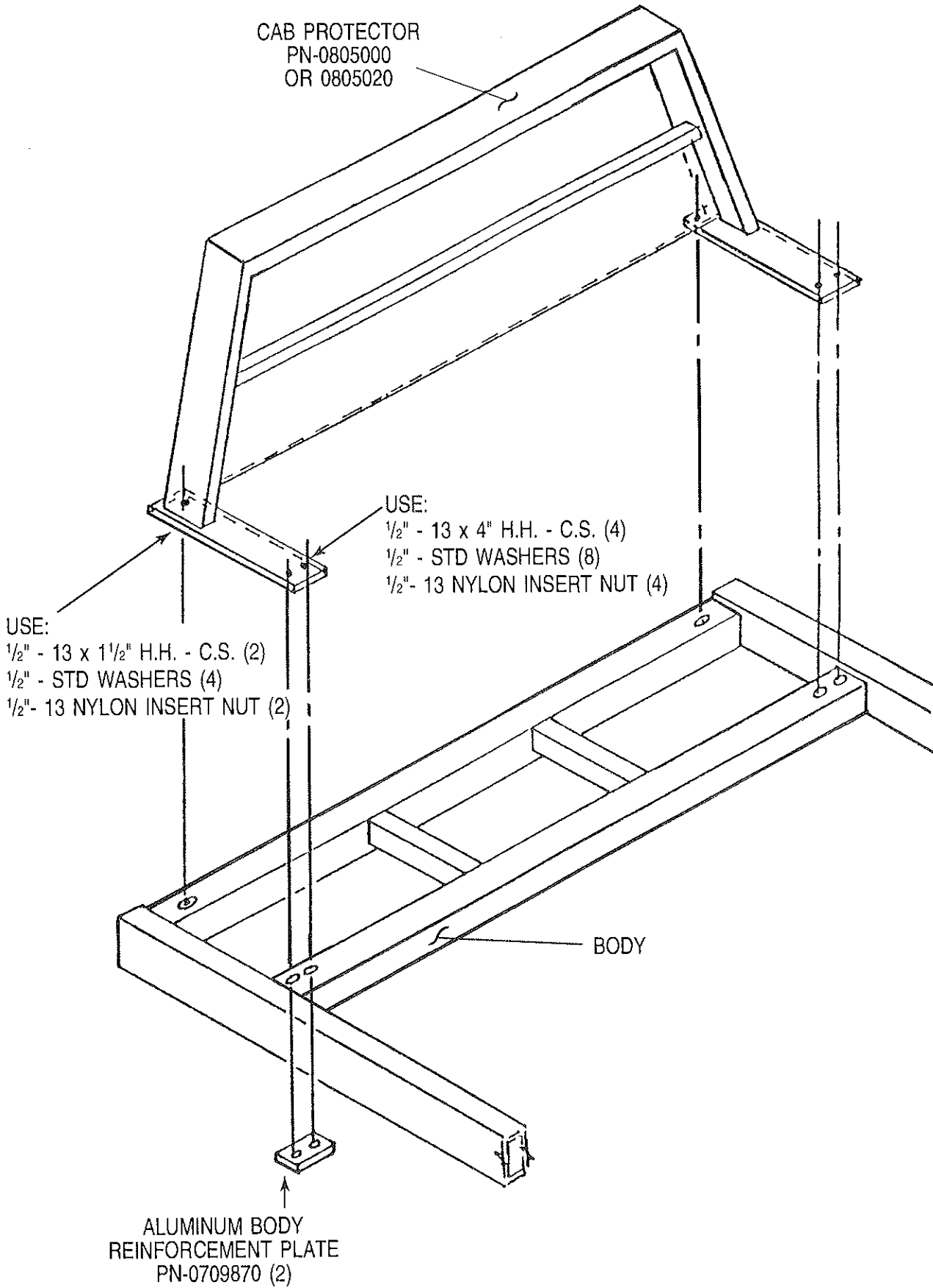
USE:

$\frac{1}{2}$ " - 13 x  $1\frac{3}{4}$ " H.H. - C.S. (8)

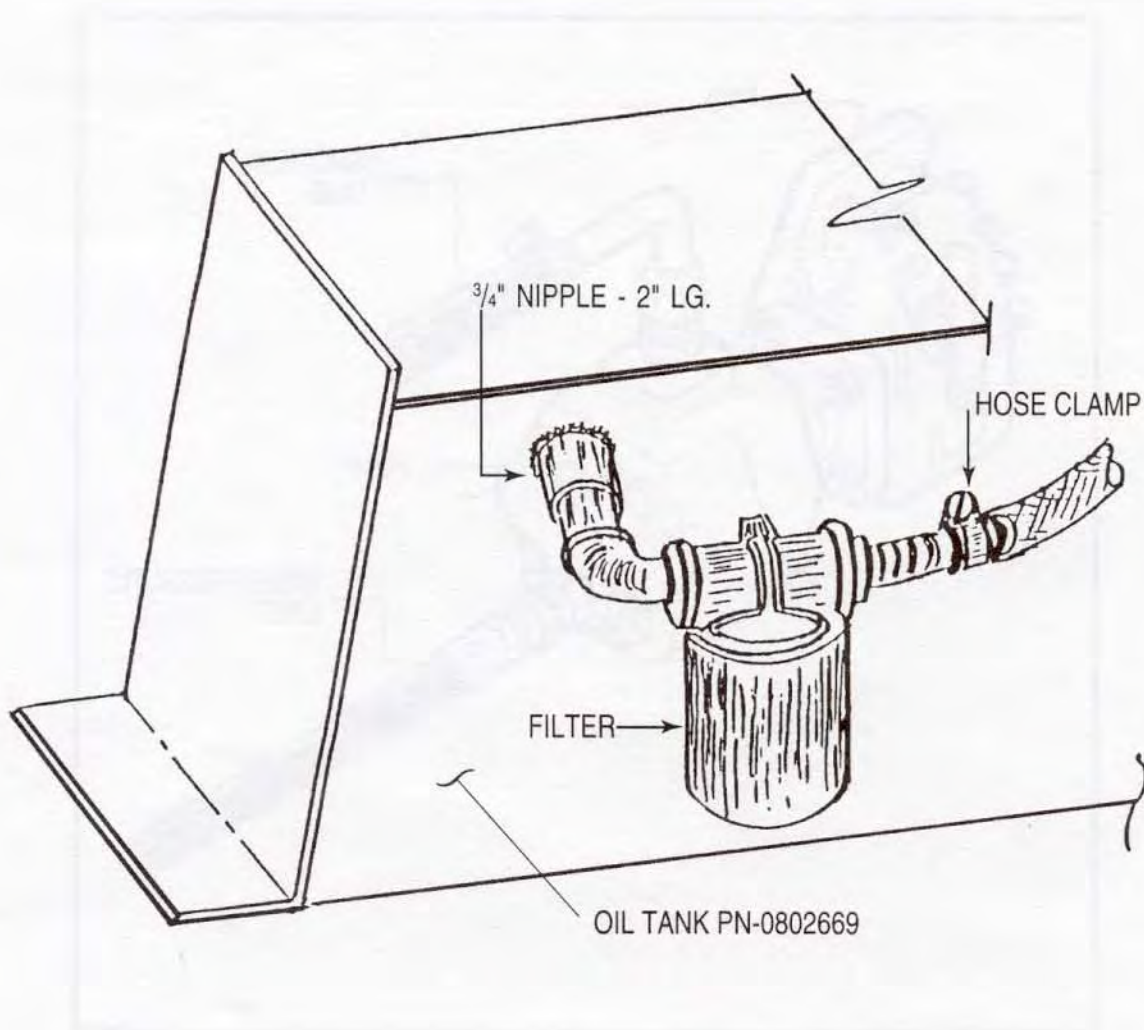
$\frac{1}{2}$ " - STD WASHERS (16)

$\frac{1}{2}$ " - 13 NYLON INSERT NUT (8)

# SECTION II - CARRIER CAB PROTECTOR



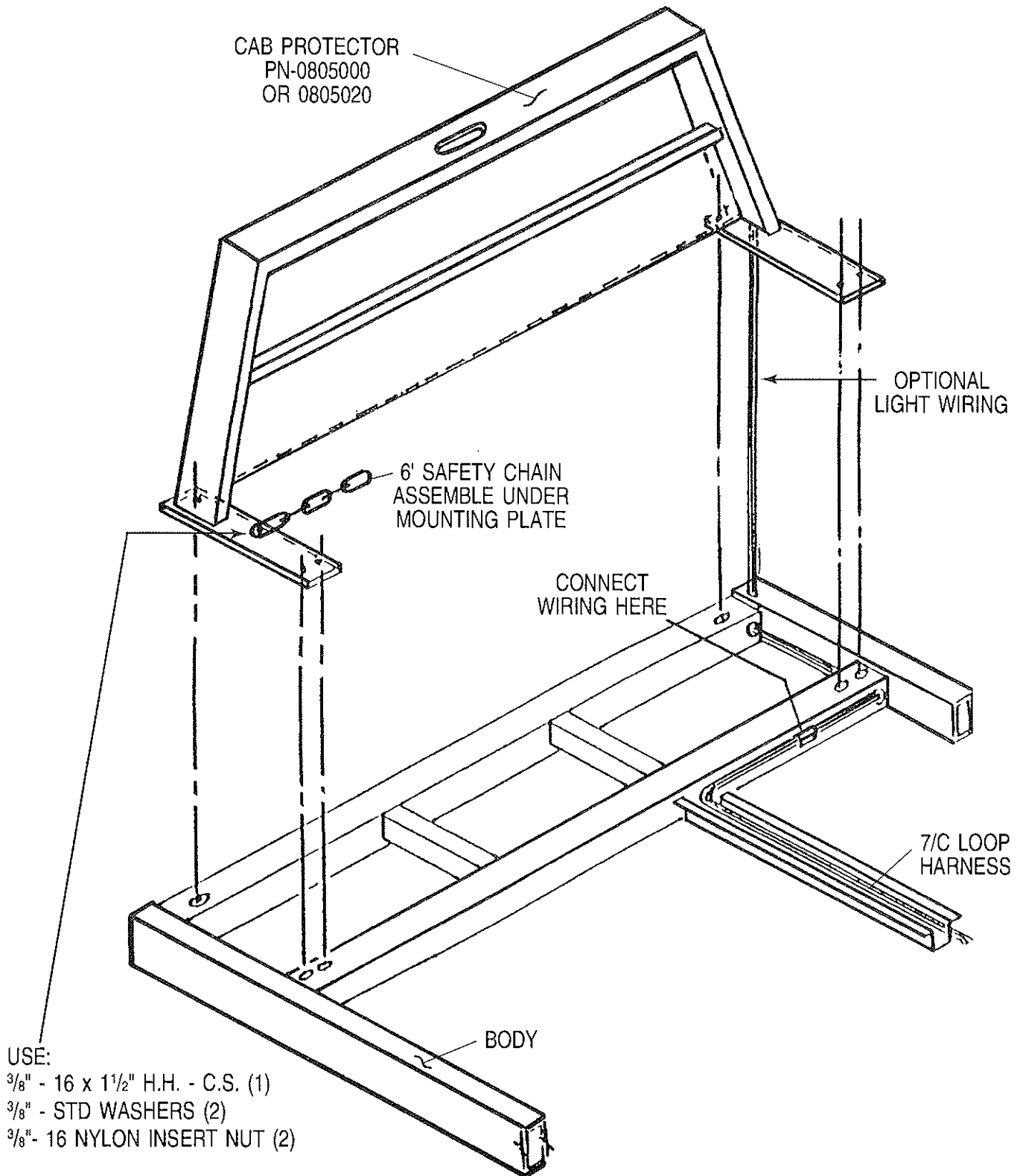
## SECTION II - CARRIER OIL RESERVOIR FILTER



### CAUTION

MAKE SURE THAT OIL RESERVOIR IS FULL BEFORE OPERATING UNIT. — FILL OIL TANK TO 1½" BELOW TOP OF TANK WITH BODY EXTENDED FOUR FEET AND ALL OTHER CYLINDERS COLLAPSED.

# SECTION II - CARRIER CAB PROTECTOR - WIRING INSTALLATION AND SAFETY CHAIN INSTALLATION





# NOTES

A series of horizontal lines for writing notes, with a faint background diagram of a mechanical system. The diagram includes a large vertical cylinder on the left, a central horizontal cylinder, and various smaller components and lines representing a complex assembly.



