

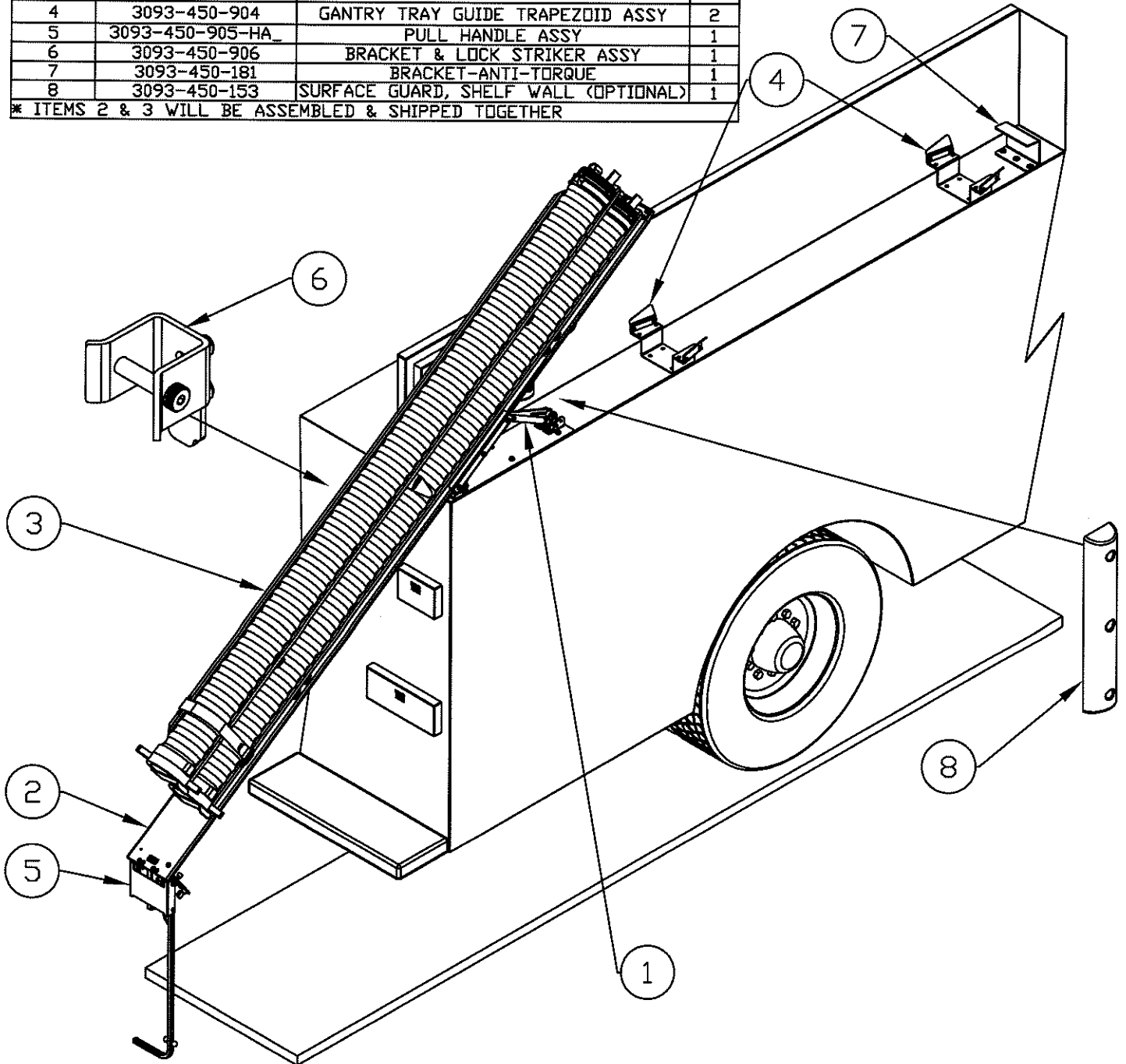
**DOUBLE HARD SLEEVE GANTRY SYSTEM
MODEL HSG-2
PARTS AND INSTRUCTION MANUAL**

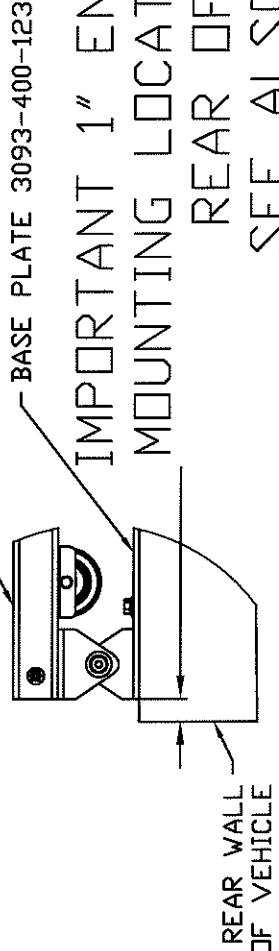
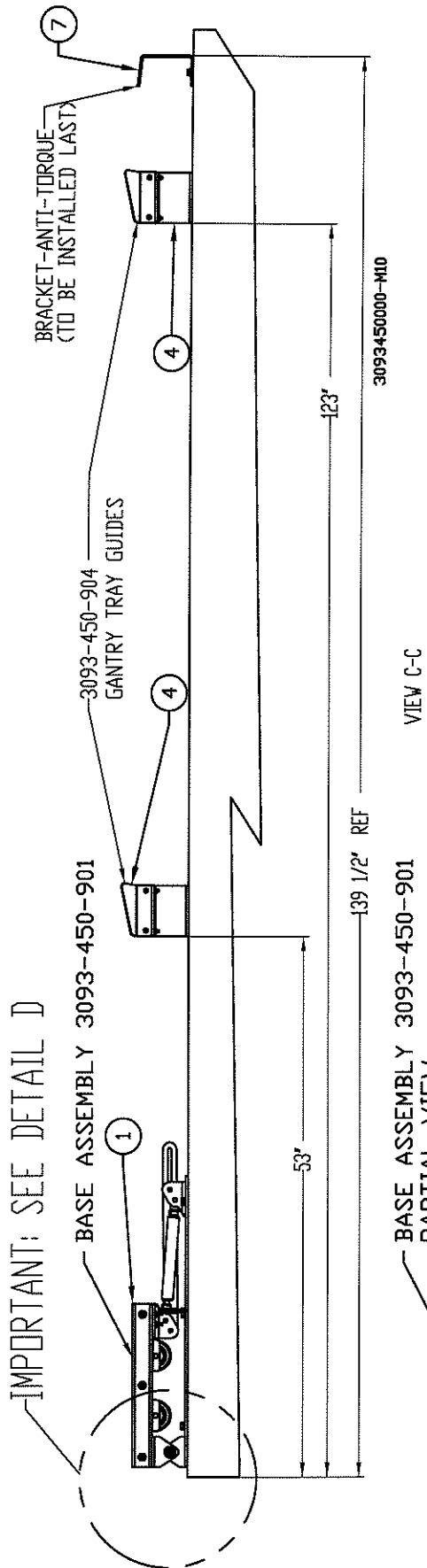
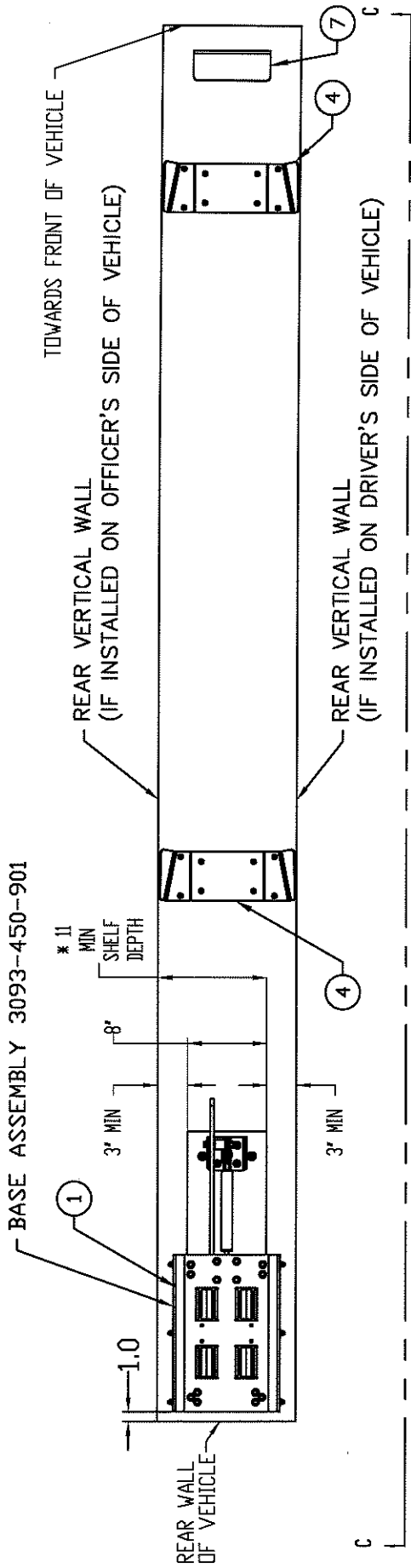
**ZICO®
3093PM3**

03/28/24

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	3093-450-901	BASE ASSEMBLY, HSG-2	1
*2	3093-450-902	MAIN RAIL ASSY	1
*3	3093-450-903	DOUBLE BRACKETS WITH TRAY ASSY	1
4	3093-450-904	GANTRY TRAY GUIDE TRAPEZOID ASSY	2
5	3093-450-905-HA	PULL HANDLE ASSY	1
6	3093-450-906	BRACKET & LOCK STRIKER ASSY	1
7	3093-450-181	BRACKET-ANTI-TORQUE	1
8	3093-450-153	SURFACE GUARD, SHELF WALL (OPTIONAL)	1

* ITEMS 2 & 3 WILL BE ASSEMBLED & SHIPPED TOGETHER

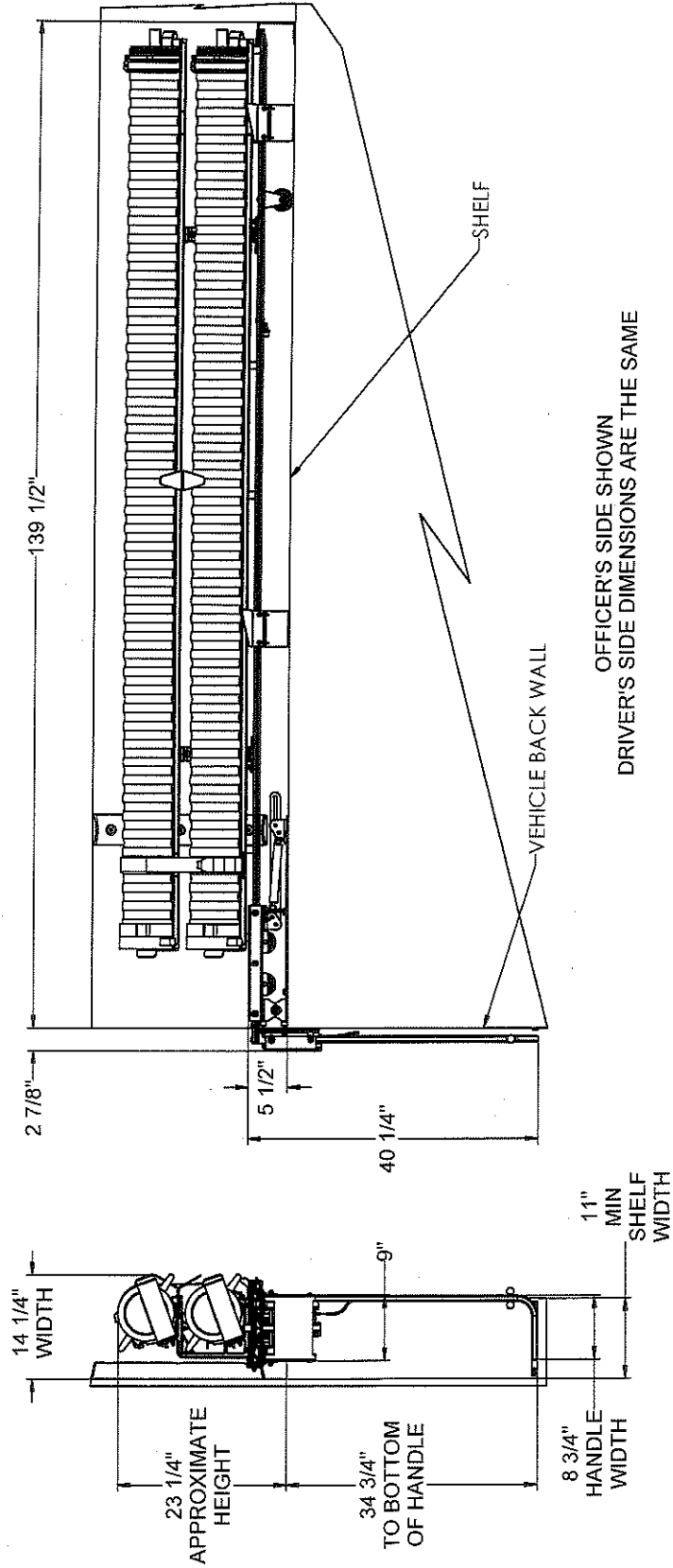




PLAN LAYOUT
FIGURE 1

IMPORTANT 1" END OF BASE PLATE
MOUNTING LOCATION OFFSET FROM
REAR OF VEHICLE
SEE ALSO FIGURE 5

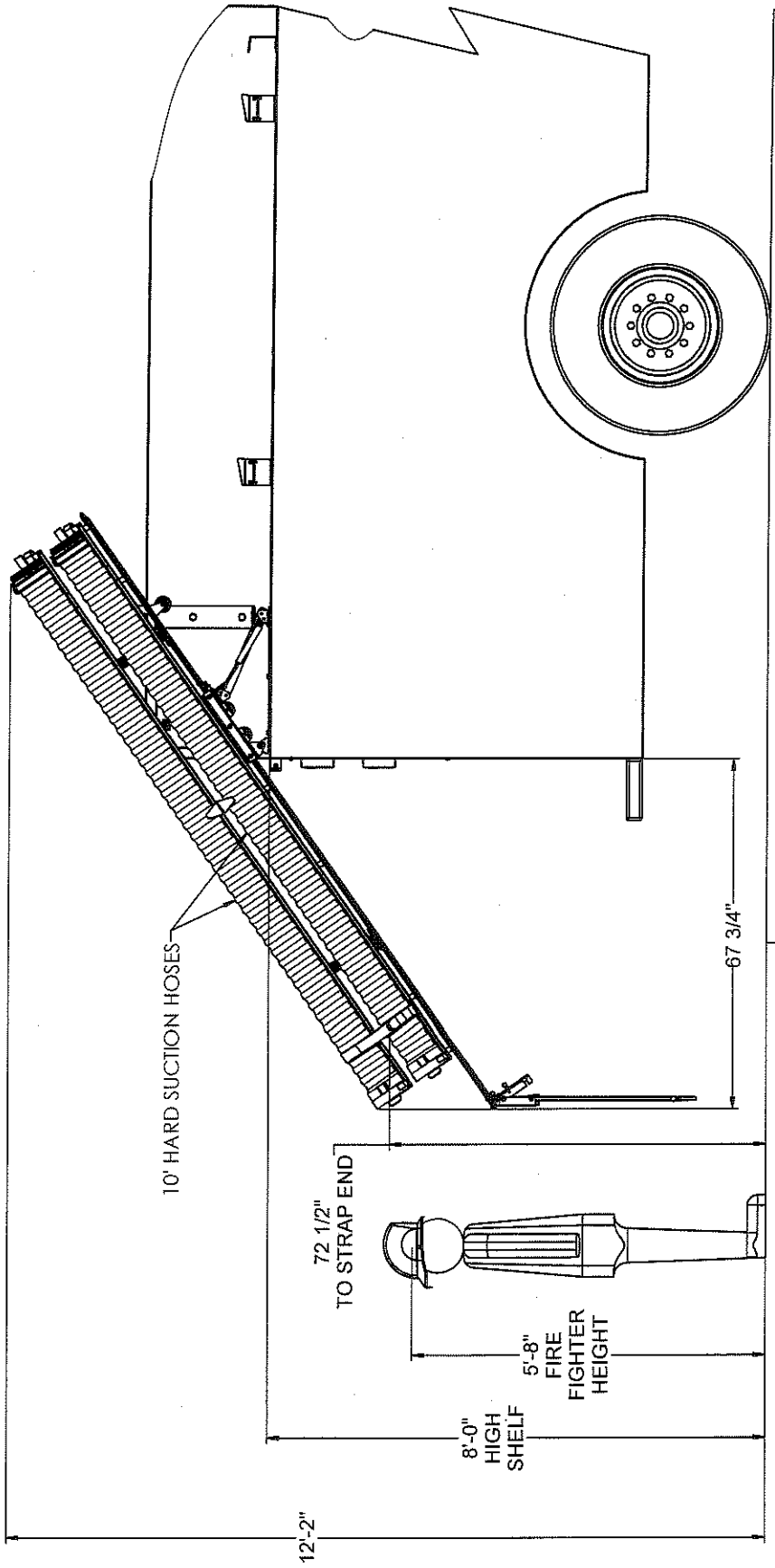
DETAIL SEE DETAIL D
SCALE 1:2



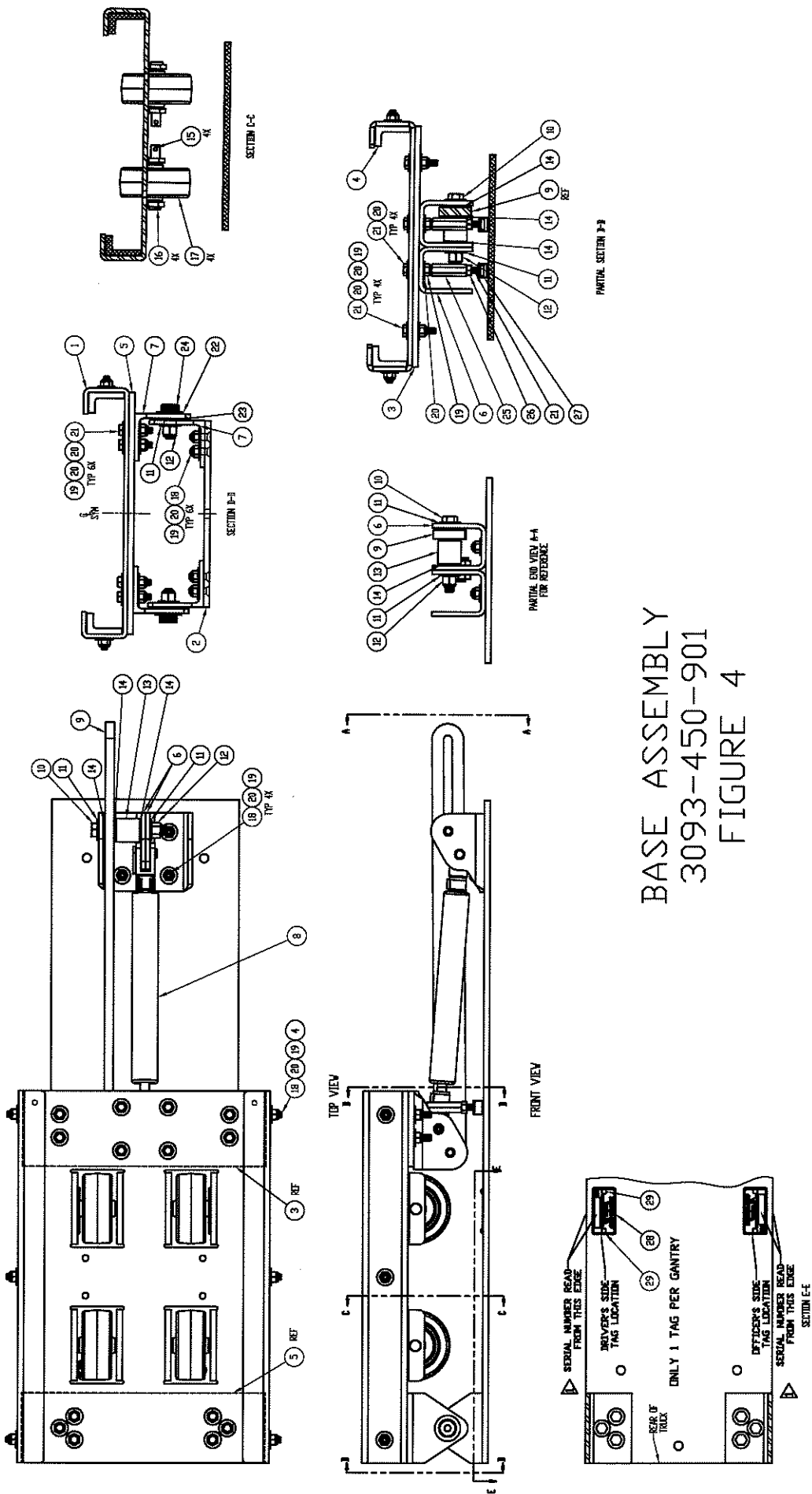
OFFICER'S SIDE SHOWN
 DRIVER'S SIDE DIMENSIONS ARE THE SAME

GANTRY OVERALL DIMENSIONS
 (STOWED POSITION)
 FIGURE 2

OFFICER'S SIDE
 REAR OF TRUCK

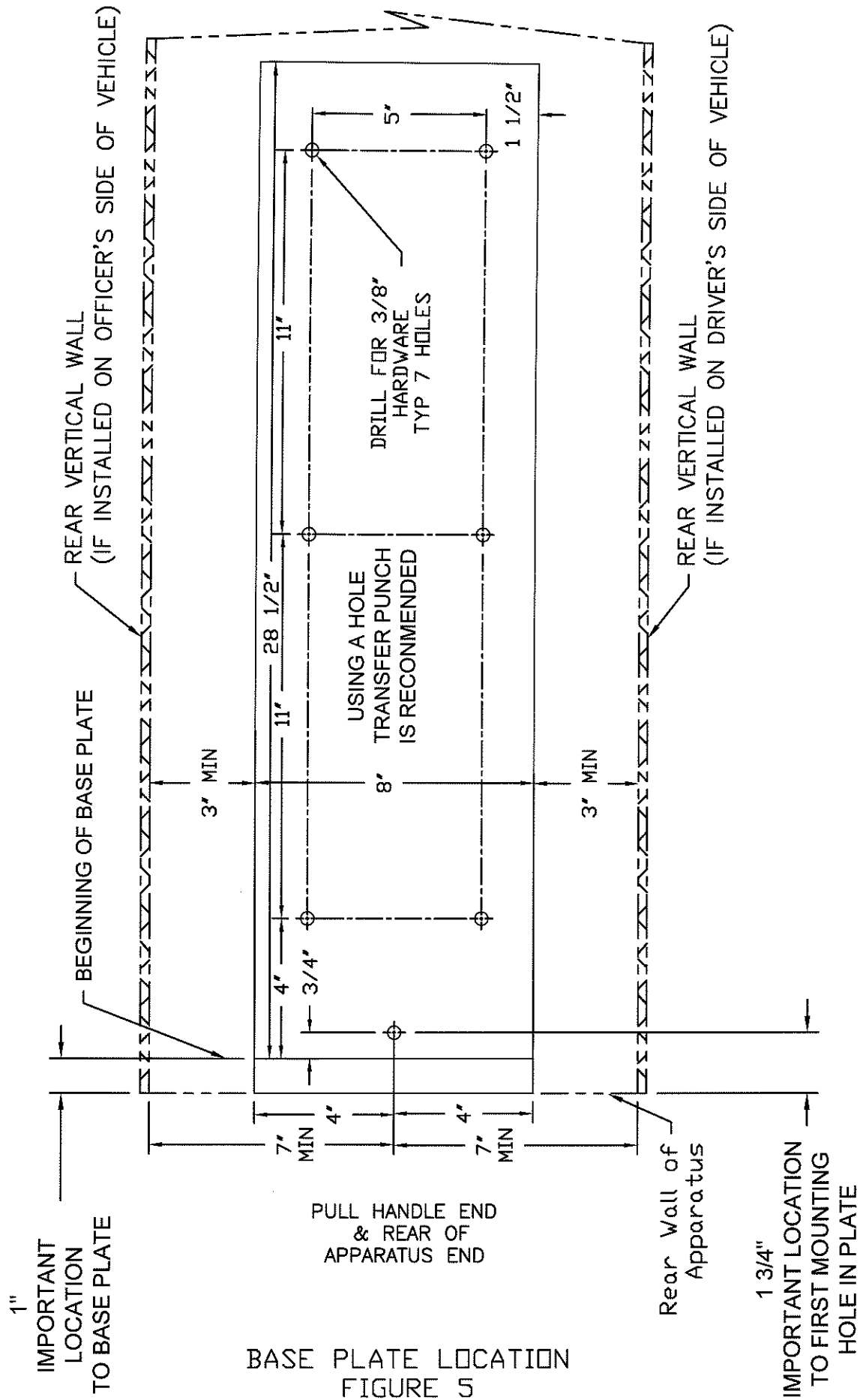


Gantry Mounted Dimensions
(Deployed position)
FIGURE 3

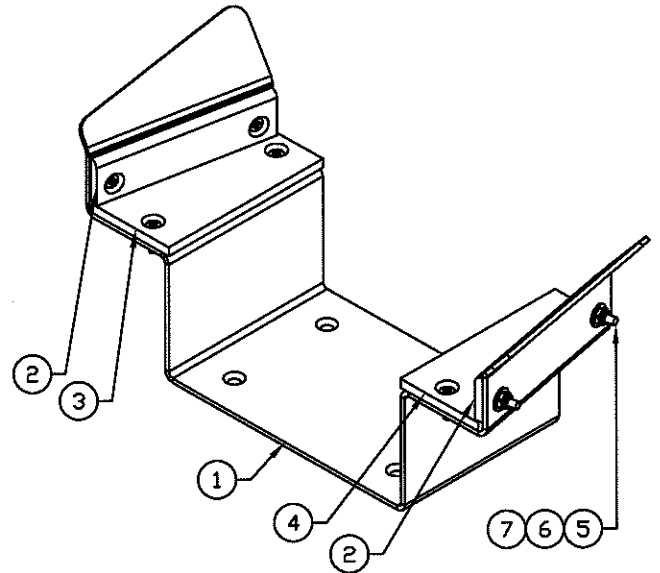
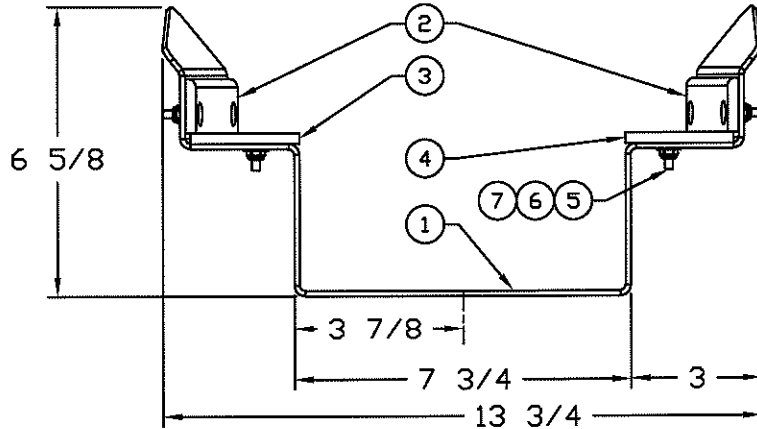
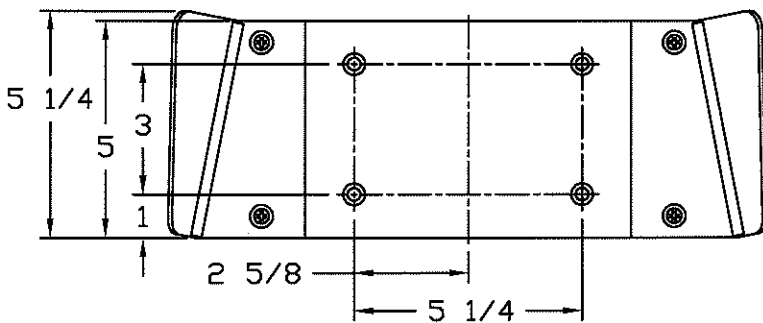


BASE ASSEMBLY 3093-450-901

ITEM	PartNo	DESCRIPTION	QTY
1	3093-450-101	GANTRY TRAY RECEIVER	1
2	3093-400-123	GANTRY BASE PLATE	1
3	3093-400-127	GANTRY TRAY STIFFENER UPPER	1
4	3093-450-103	GANTRY TRAY WEAR ANGLE	2
5	3093-450-155	GRANTRY TRAY STIFFENER LOWER	1
6	3093-450-105	BRACKET, STOP & DAMPER	4
7	3093-450-107	GANTRY TRAY PIVOT	4
8	3093-450-109	DAMPER HSG-2	1
9	3093-450-111	LINKAGE, SLOTTED STOP	1
10	9018-103748	SCREW,3/8-16x3' HEX HEAD GR8	2
11	9014-183700	WASHER,Ø3/8' FLAT, GR8	6
12	9018-173700	NUT 3/8'-16 NYLON LOCK YELLOW ZPS GR8	4
13	3093-450-113	STOP SPACER, Ø.377 ID x Ø1 OD x 1.000L	2
14	3093-400-153	WASHER, 3/8IDx3/4OD FLAT NYLON	6
15	9170-001212	COTTER PIN,Ø1/8"x3/4' S/S	4
16	9080-003738	Clevis Pin,Ø3/8x2 3/8' USABLE	4
17	3093-400-113	WHEEL, Ø3.0x3/8' AXLE	4
18	9010-162514	SCREW,1/4-20x7/8' FLAT PHIL HEAD 82°,CSK	16
19	9013-172500	NUT, 1/4-20 NYLON LOCK HEX NUT, ZPS	30
20	9014-112500	WASHER, 1/4' FLAT, ZPS	44
21	9010-102500	SCREW, 1/4-20x1 1/4', HEX HD, FULL THREAD,ZPS	16
22	9014-185000	WASHER,Ø1/2xØ1 1/4 GR8	2
23	3097-105-130	WASHER,NYLON .505' ID x .75'OD x .062' thick	2
24	9010-315008	SCREW-SHOULDER Ø.500x.500x.375-16	2
25	9012-422524	COUPLING NUT, 1/4-20x1 1/2', 7/16' HEX, ZPS	2
26	9012-102500	NUT, 1/4-20 HEX HD, ZPS	2
27	3087-195-110	CAP, PVC FOR 1/4-20 HEX HEAD	2
28	0000-000-112	SERIAL NUMBER LABEL	1
29	9120-101103	DRIVE SCREW, TYPE U, #4x3/16	2

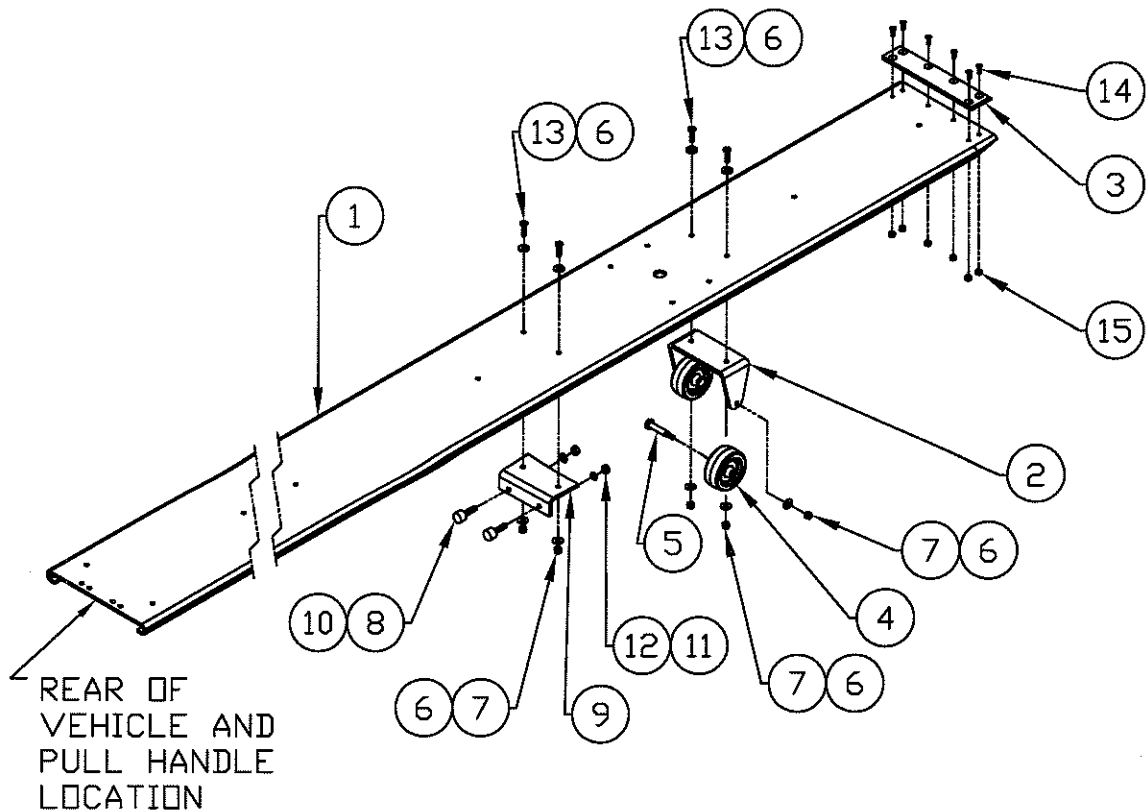


ITEM	PartNo	DESCRIPTION	QTY.
1	3093-450-121	GANTRY TRAY GUIDE, TRAPEZOID	1
2	3093-450-123	WEAR STRIP-SIDE, TRAY GUIDE	2
3	3093-450-125	WEAR STRIP-LH, TRAY GUIDE	1
4	3093-450-127	WEAR STRIP-RH, TRAY GUIDE	1
5	9010-162012	SCREW,10-32 X 3/4 FH,PHIL ZPS	8
6	9014-112000	WASHER, #10 FLAT, REGULAR, ZPS	8
7	9013-172000	NUT, #10-32 SELF LOCKING - LOW PRD	8



GANTRY TRAY GUIDE
 TRAPEZOID ASSEMBLY
 3093-450-904
 FIGURE 6

NO.	PartNo	DESCRIPTION	QTY.
1	3093-450-129	MAIN RAIL	1
2	3093-400-107	BRACKET, Ø3" WHEELS	1
3	3093-450-131	WEAR STRIP, MAIN RAIL	1
4	3093-400-113	WHEEL, Ø3.0x3/8" AXLE	2
5	9010-623726	SCREW, SHOULDER, Ø3/8x1 5/8"x1/4-20	2
6	9114-112500	WASHER, 1/4" FLAT,SS	10
7	9113-172500	NUT, 1/4-20 NYLON LOCK HEX NUT, SS	6
8	1027-105-133	RED CYLINDER STOP, 5/16-18	2
9	3093-400-147	BRACKET, TRAY STOP	1
10	9010-573125	FULL THREADED STUD, 5/16-18x1 1/2" ZPS	2
11	9014-203100	WASHER, LOCK Ø5/16 ZPS	2
12	9012-113100	NUT, 5/16-18, HEX HD, ZPS	2
13	9110-222516	SCREW,1/4-20x1" PAN PHIL HEAD, SS	4
14	9010-162010	SCREW, #10-32 x 5/8" FH, PH ZPS	6
15	9013-172000	NUT,#10-32 NYLON LOCK, ZPS	6



MAIN RAIL ASSEMBLY
 3093-450-902
 FIGURE 7

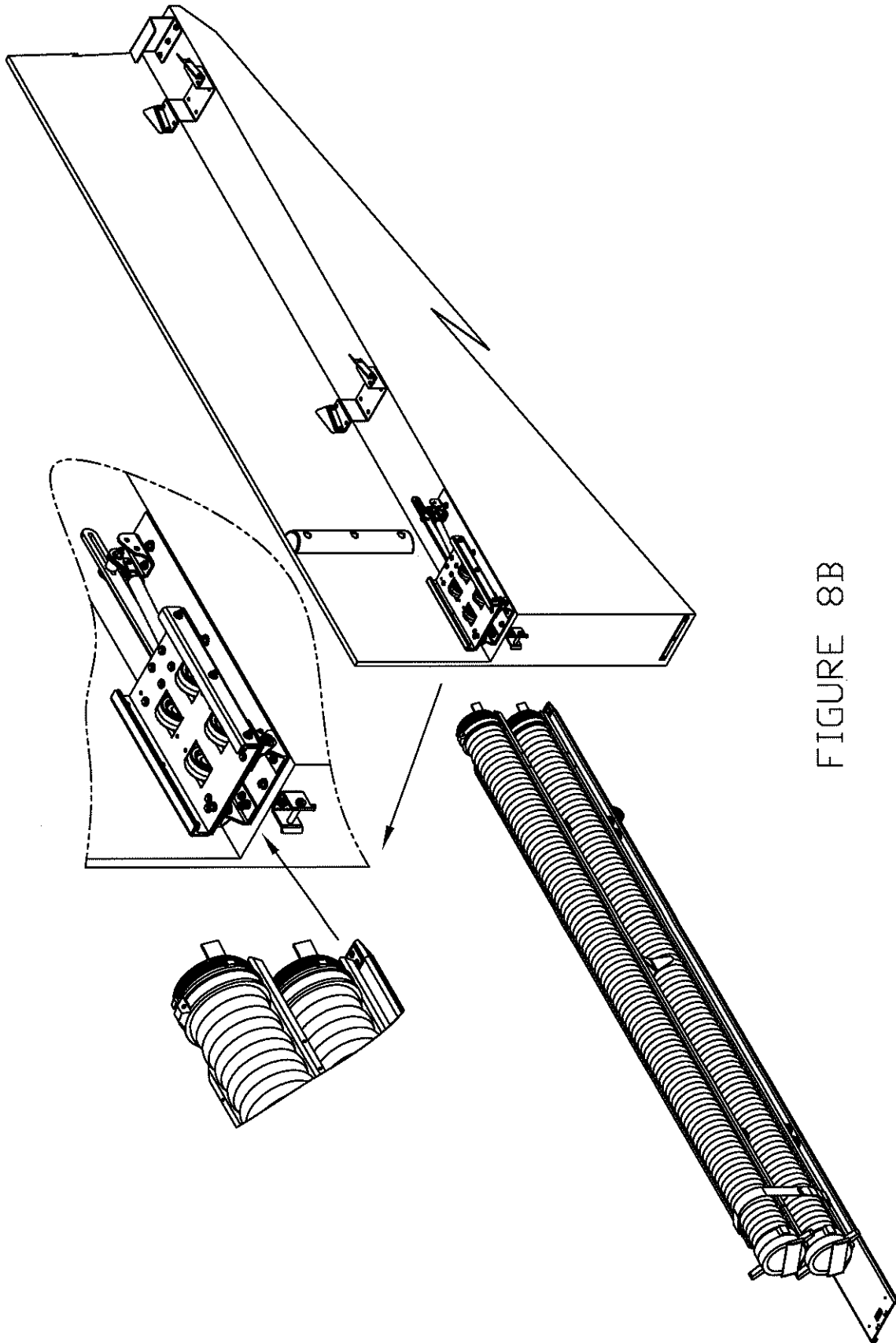
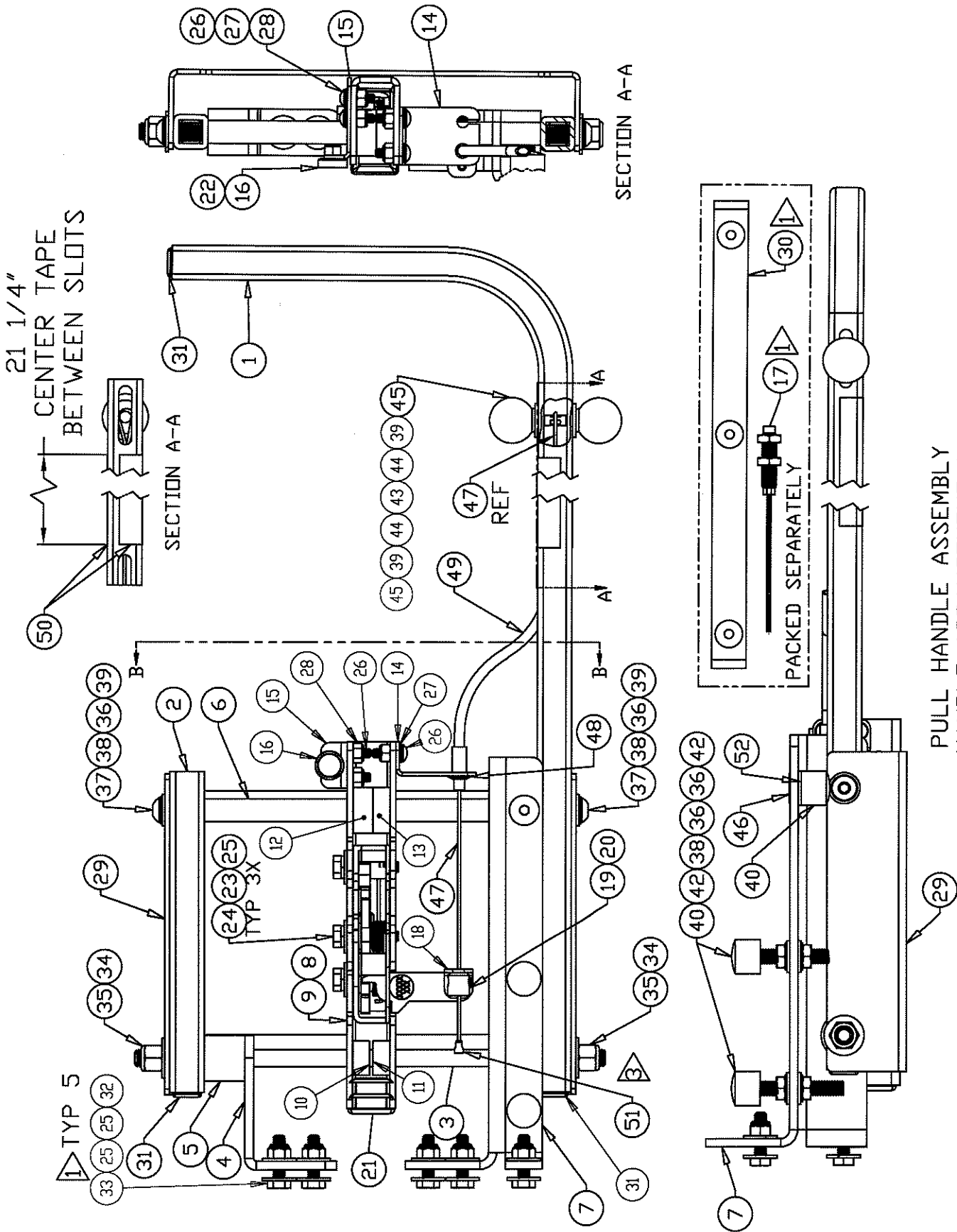


FIGURE 8B



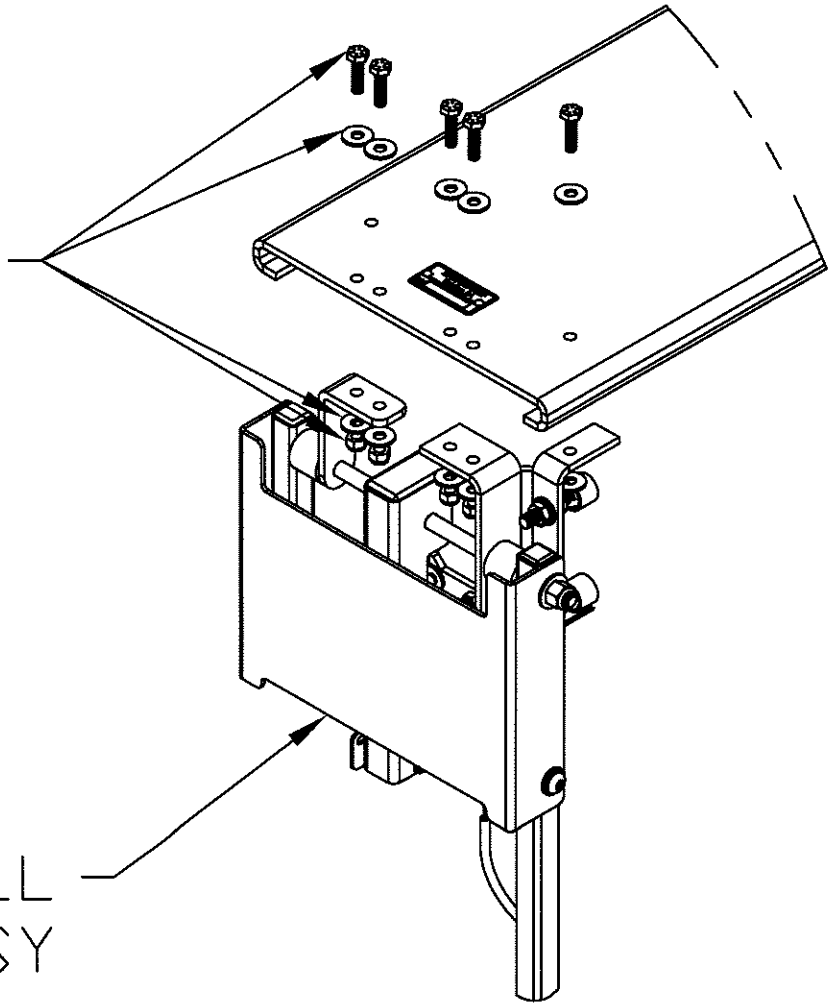
PULL HANDLE ASSEMBLY
HANDLE ARRANGEMENT #1
3093-450-905
FIGURE 9A

PULL HANDLE ASSEMBLY
3093-450-905-HA_
SEE FIGURE 9A

ITEM NO.	PartNo	DESCRIPTION	QTY.
1	3093-450-135	PULL HANDLE RAIL, "J" HANDLE	1
2	3093-450-137	PULL HANDLE RAIL, SHORT	1
3	3093-450-139	HINGE ROD	1
4	3093-450-141	PULL HANDLE MAIN RAIL BRACKET	1
5	3093-450-143	PULL HANDLE SPACER	2
6	3093-450-145	PULL HANDLE LOCK ROD	1
7	3093-450-157	BRACKET- STOP, PULL HANDLE, RH	1
8	3093-450-150	ROTARY LATCH, TRIMARK 11789-16 RH	1
9	3093-450-147	CHANNEL BRACKET, ROTARY LATCH, TRIMARK	1
10	3093-450-161	COLLAR w/ SET SCREW, Ø.375IDxØ3.75ODx3/8"W	1
11	3093-450-165	SPACER, Ø.380IDxØ.750ODx .375 LONG, NYLON	1
12	3093-450-163	COLLAR w/ SET SCREW, Ø.500IDxØ1.000ODx7/16"W	1
13	3093-450-167	SPACER, Ø.505IDxØ1.000ODx .375 LONG	1
14	3093-450-169	BRACKET, CABLE	1
15	3093-450-171	BRACKET, INDICATOR SWITCH	1
16	3096-087-103	ENCASED NEODYMIUM MAGNET, #8-32	1
17	3096-087-105	MAGNETICALLY ACTUATED SWITCH W/ WIRE LEADS	1
18	3093-450-179	BRACKET, CABLE STOP SLEEVE	1
19	1045-320-185	STOP SLEEVE	1
20	9010-391603	SET SCREW, #8-32x3/16, FLAT POINT	1
21	3093-450-177	PLUG, 1"x2" BLACK	1
22	9013-171600	NUT, #8-32 NYLON LDC, ZPS	1
23	9014-202500	WASHER, Ø1/4 SLIT LOCK, ZPS, GR2	3
24	9018-102520	SCREW, Ø1/4-20x1 1/4 HEX GR8	3
25	9014-182500	WASHER, 1/4" FLAT GR8	13
26	9010-222010	SCREW, #10-5/8" ZPS PH PHIL	5
27	9014-112000	WASHER, #10 NARROW, ZPS	4
28	9013-172000	NUT, #10-32 NYLON LDC, ZPS	5
29	3093-450-159	CHANNEL STIFFENER, PULL HANDLE	1
30	3093-450-175	HANDLE GUARD	1
31	3093-400-157	PLUG 3/4" SQ (1/2" SQ ID) BLACK	3
32	9018-172500	NUT, 1/4-20 NYLON LOCK HEX NUT GR8	5
33	9018-102516	SCREW, 1/4-20x1" HEX HD, GR8	5
34	9014-183700	WASHER, Ø3/8" FLAT, GR8	2
35	9018-173700	NUT 3/8"-16 NYLON LOCK YELLOW ZPS GR8	2
36	9014-183100	WASHER, 5/16 FLAT, GR8	6
37	9010-503124	SCREW, 5/16-18 x 1 1/2", BUTTON, HEX DR CAP, ZPS, GR5	2
38	9014-203100	WASHER, Ø5/16 SPLIT LOCK, GR2	6
39	0000-000-121	THREAD LOCK, MEDIUM	A/R
40	1027-105-133	RED CYLINDER STOP, 5/16-18	3
41	9010-573132	FULL THREADED STUD, 5/16-18x2" ZPS	2
42	9112-203100	NUT, 5/16-18 HEX NUT THIN - JAM SS	4
43	3093-450-173	STUD, 1 1/2"x1/4-20x1/2" BOTH ENDS	1
44	1020-310-120	WASHER, 1/4x1/2x.1/16 FLAT NYLON	2
45	1020-000-172	CONTROL BALL, THREADED INSERT	2
46	9010-163110	SCREW, 5/16-18 x5/8 FH 82° ZPS	1
47	3093-450-185	CABLE W/ LOOP	1
48	1027-105-137	PUSH NUT (for 6 MM rod) Push-on External Retaining Rings	1
49	1027-105-129	CABLE HOUSING ASSY (CUT TO	
50	4005-000-105	REFLECTIVE TAPE, 1" x 21 1/4", WHITE	2
51	1045-320-159	BALL WITH SHANK	1
52	3093-400-153	WASHER, 3/8ID x 3/4OD FLAT NYLON	1

3093-450-905-HA_ ITEMS PACKED SEPARATELY FOR THE INSTALLER USE; FASTENERS ARE FOR THE HANDLE TO MAIN RAIL ATTACHMENT THESE ITEMS ARE ACCOUNTED FOR IN THE MAIN BOM			
ITEM NO.	PartNo	DESCRIPTION	QTY.
17	3096-087-105	MAGNETICALLY ACTUATED SWITCH W/ WIRE LEADS	1
25	9014-182500	WASHER, 1/4" FLAT GR8	10
30	3093-450-175	HANDLE GUARD	1
32	9018-172500	NUT, 1/4-20 NYLON LOCK HEX NUT GR8	5
33	9018-102516	SCREW, 1/4-20x1" HEX HD, GR8	5

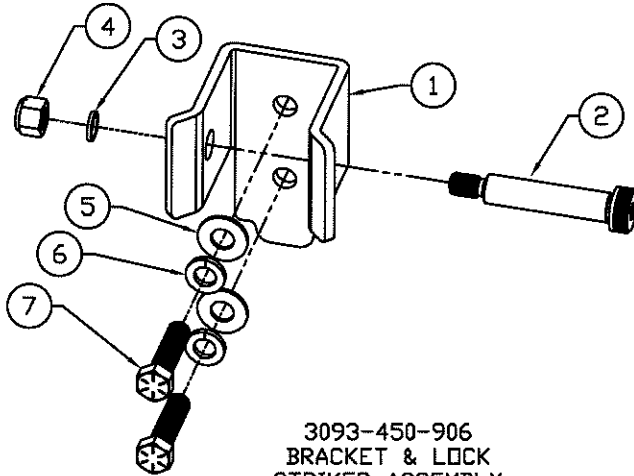
ATTACH PULL
HANDLE ASSY
WITH WITH
1/4" SUPPLIED
HARDWARE



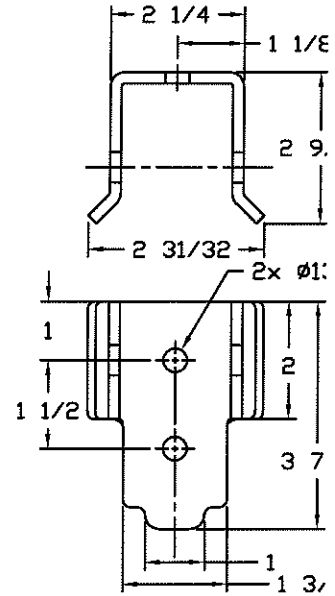
ATTACH PULL
HANDLE ASSY

FIGURE 9B

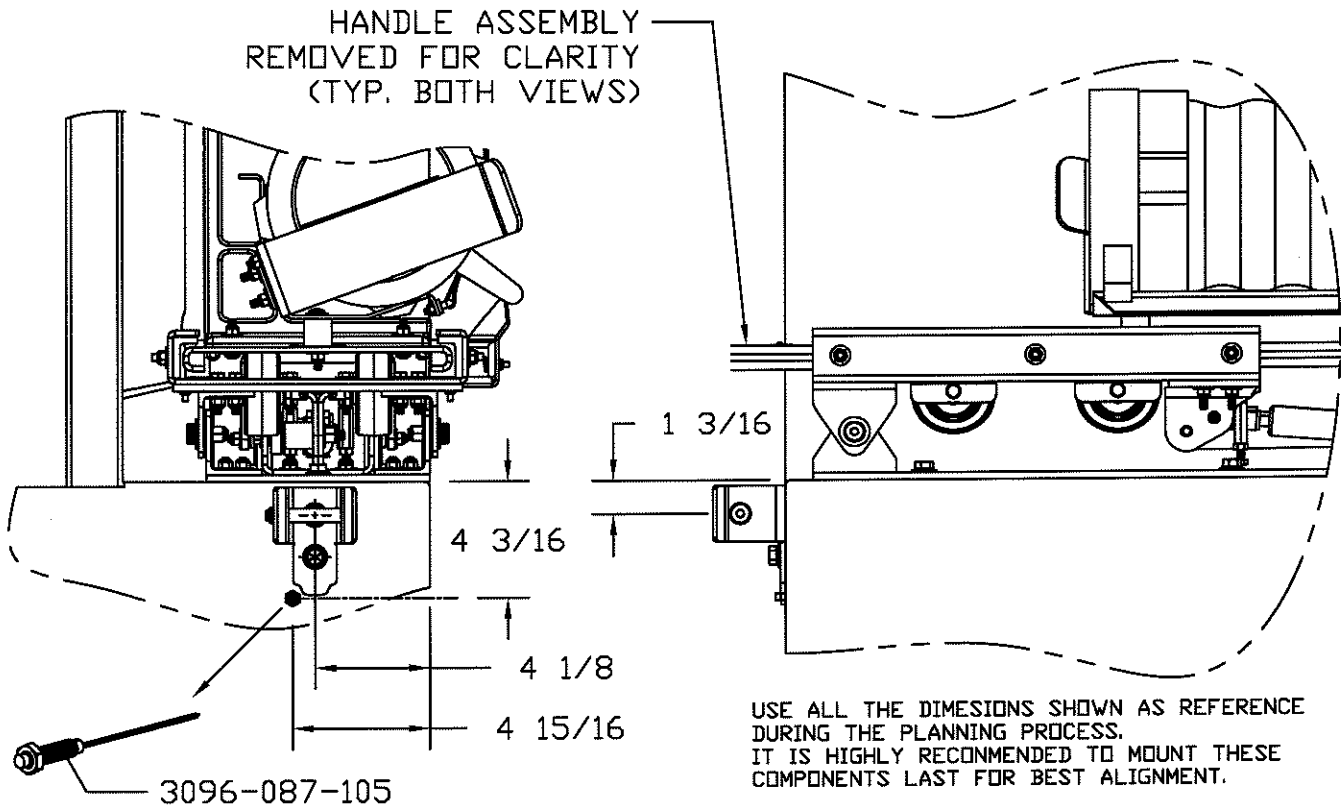
ITEM	PN	DESCRIPTION	QTY
1	3093-450-183	BRACKET, LOCK STRIKER	1
2	9010-315036	SCREW, SHOULDER, Ø.500x2.250 LONG, 3/8-16 ZPS	1
3	9114-103700	SPACER, SHOULDER SCREW, 1/2"ODx3/8"IDx1/16" THK. SS	1
4	9018-173700	NUT 3/8"-16 NYLON LOCK YELLOW ZPS GR8	1
5	BY OTHERS	WASHER, Ø3/8 GR8	1
6	BY OTHERS	LOCK WASHER, Ø3/8"	1
7	BY OTHERS	SCREW, 3/8-16xTBD HEX HD GR8	1



3093-450-906
BRACKET & LOCK
STRIKER ASSEMBLY
FIGURE 10A



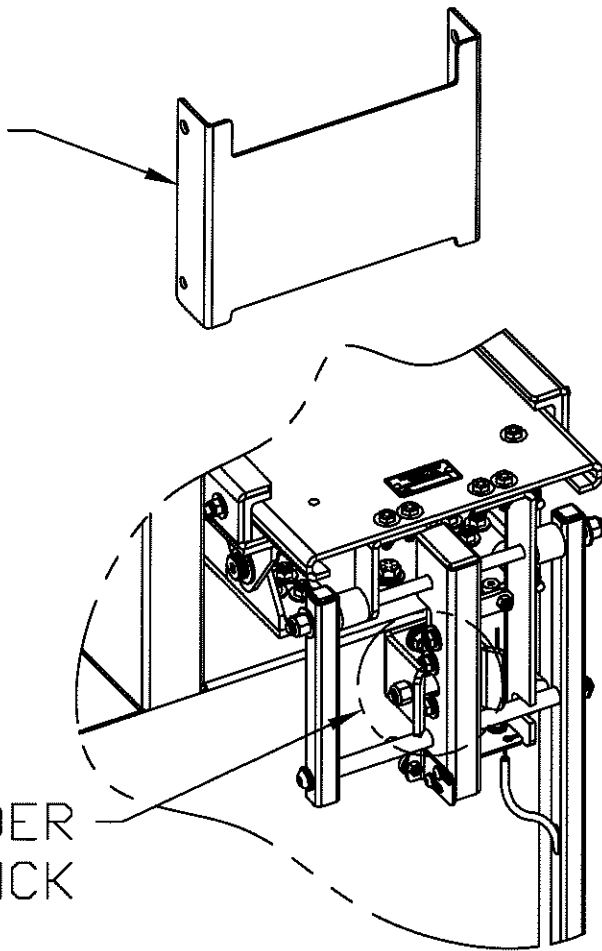
HANDLE ASSEMBLY
REMOVED FOR CLARITY
(TYP. BOTH VIEWS)



USE ALL THE DIMENSIONS SHOWN AS REFERENCE
DURING THE PLANNING PROCESS.
IT IS HIGHLY RECOMMENDED TO MOUNT THESE
COMPONENTS LAST FOR BEST ALIGNMENT.

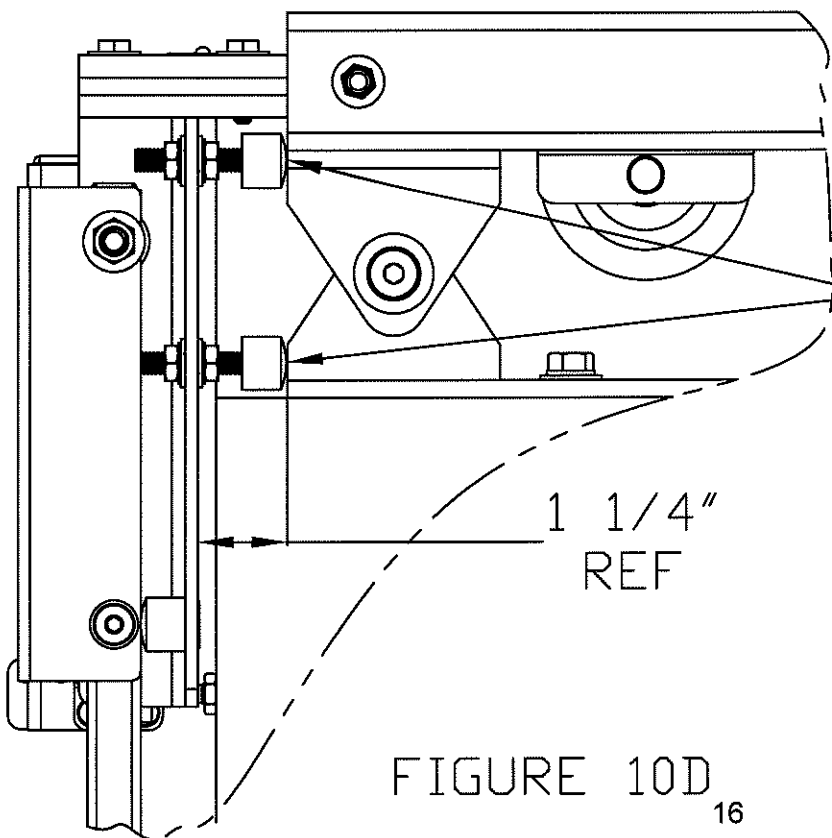
3093-450-906
BRACKET & LOCK STRIKER ASSEMBLY
AND MAGNETICALLY ACTUATED SWITCH W/ WIRE
LEADS 3096-087-105
MOUNTING ON VEHICLE
FIGURE 10B

REMOVAL OF THE CHANNEL STIFFENER MAY BE NECESSARY FOR EASE OF INSTALLATION. REPLACE UPON COMPLETION.



ALIGN SHOULDER BOLT WITH LOCK

FIGURE 10C



THE RED CYLINDER STOPS MAKING CONTACT WITH THE GANTRY TRAY PIVOTS

FIGURE 10D

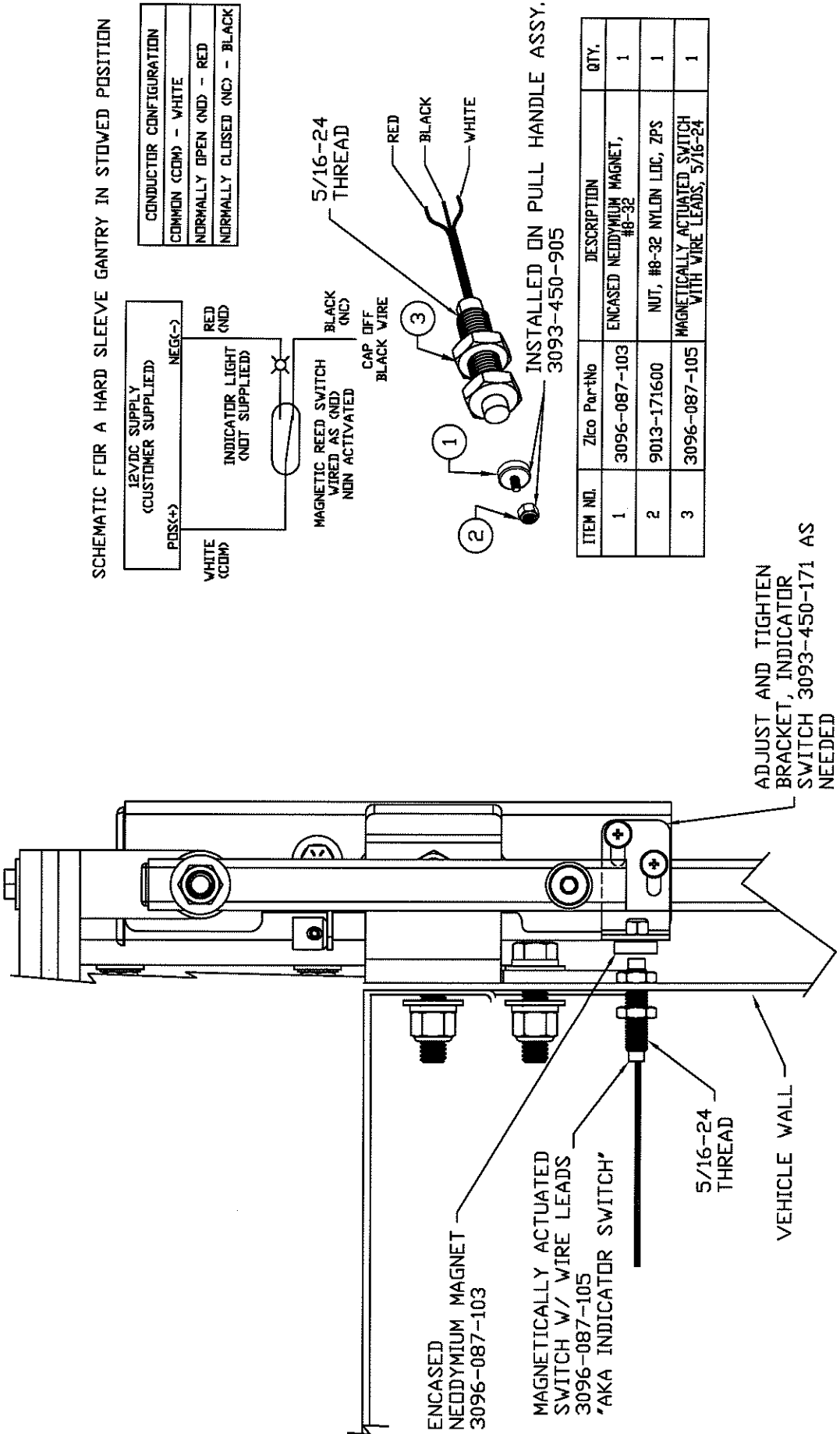
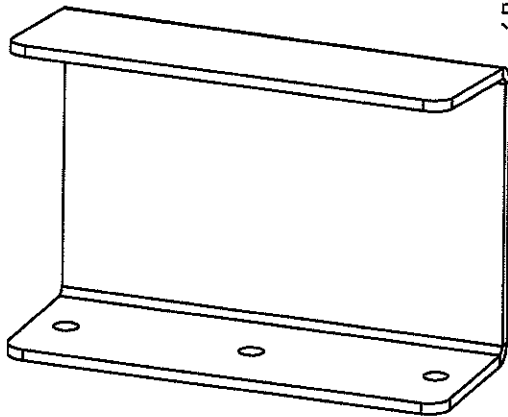
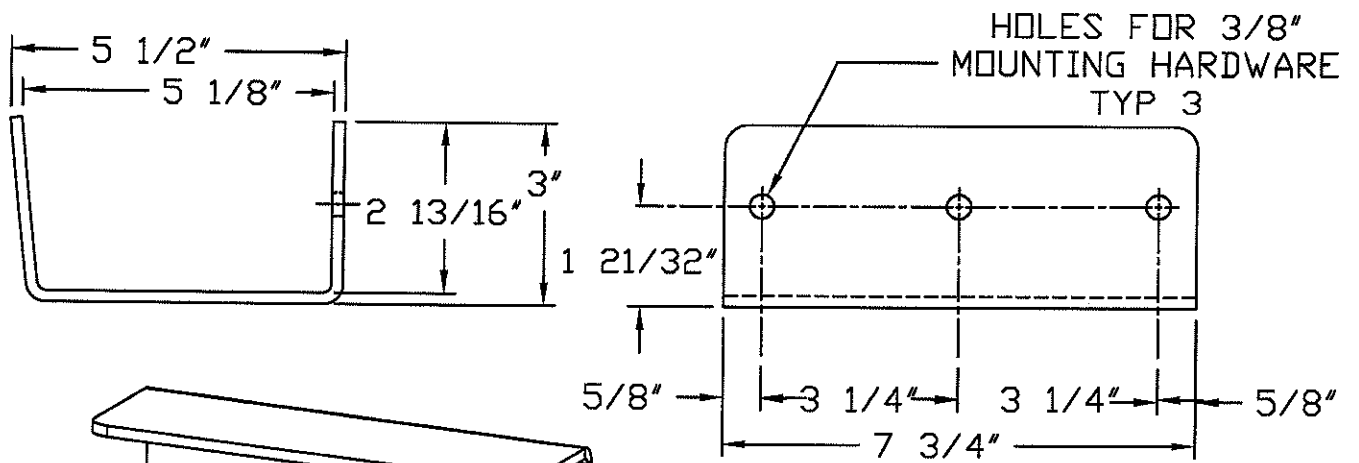


FIGURE 10E
INDICATOR SWITCH ALIGNMENT AND INSTALLATION

FIGURE 10F
MAGNETICALLY ACTUATED SWITCH (AKA INDICATOR SWITCH) W/ WIRE LEADS SCHEMATIC

FIGURE 10F
MAGNETICALLY ACTUATED SWITCH (AKA INDICATOR SWITCH) W/ WIRE LEADS SCHEMATIC

FIGURE 10F
MAGNETICALLY ACTUATED SWITCH (AKA INDICATOR SWITCH) W/ WIRE LEADS SCHEMATIC



BRACKET, ANTI-TORQUE & STOP
 3093-450-181
 FIGURE 11A

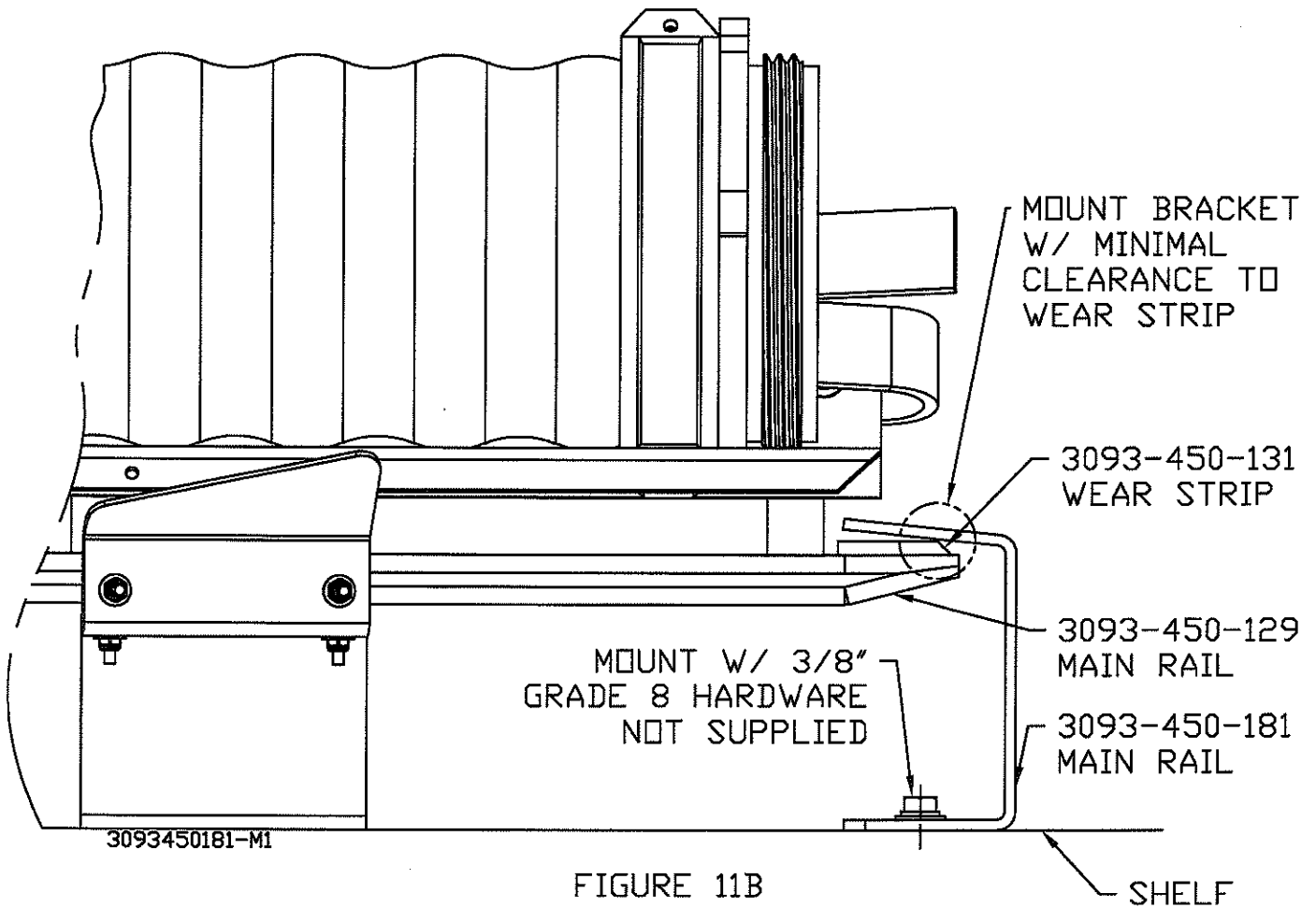
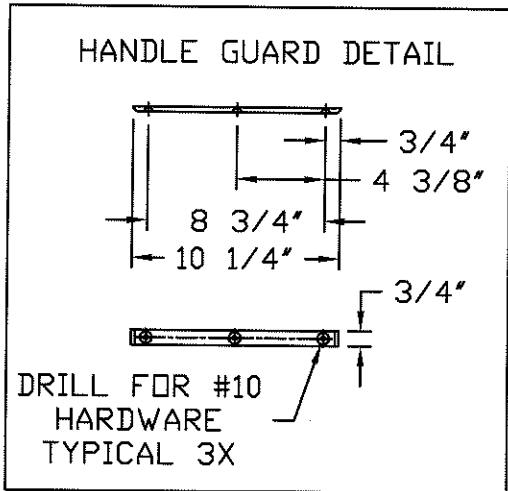


FIGURE 11B

PULL HANDLE ASSEMBLY



DRILL FOR #10
HARDWARE
TYPICAL 3X

FIGURE 12A

PUSH THE
CONTROL BALLS
DOWNWARD TO
UNLOCK THE
PULL HANDLE
AND PULL THE
HANDLE.

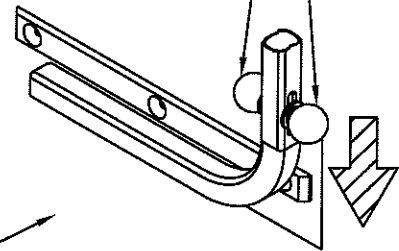


FIGURE 12B

3093-450-153
SURFACE GUARD

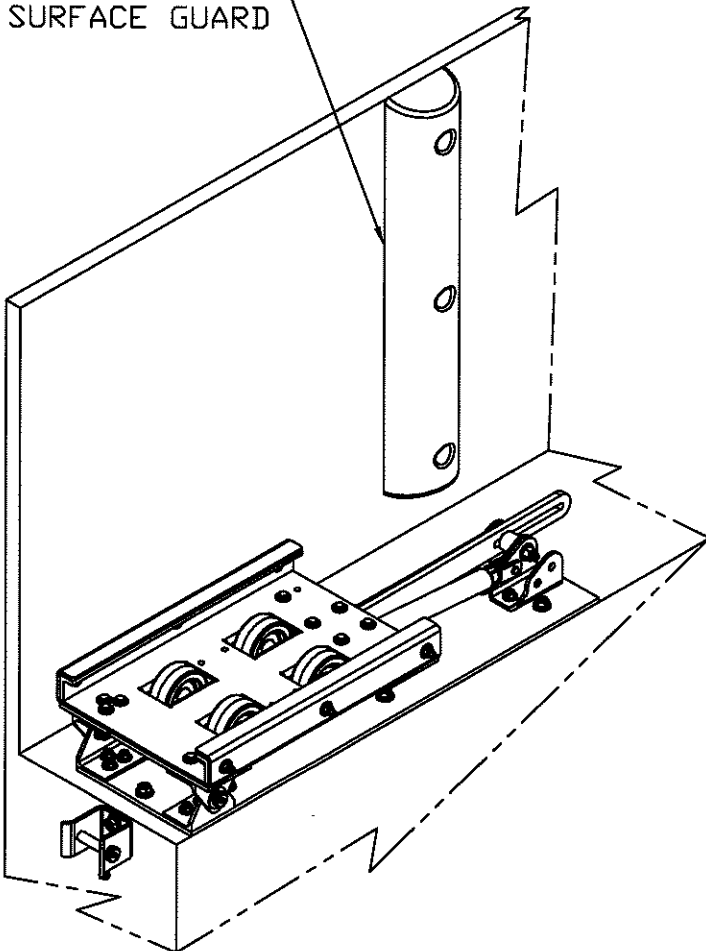
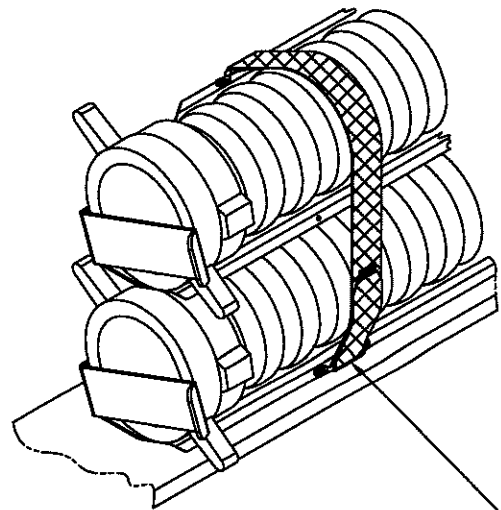
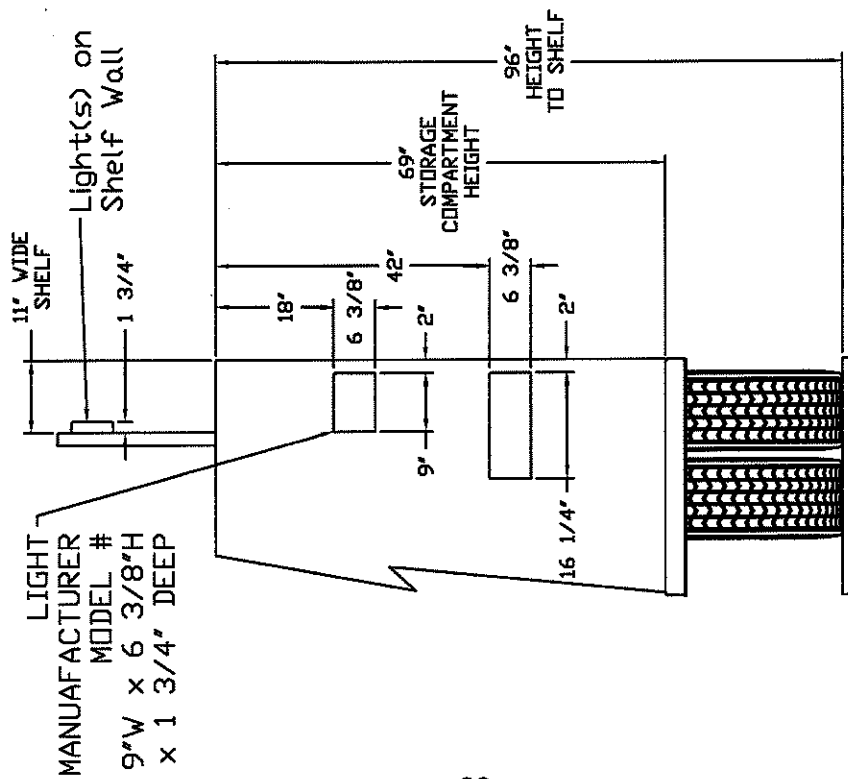
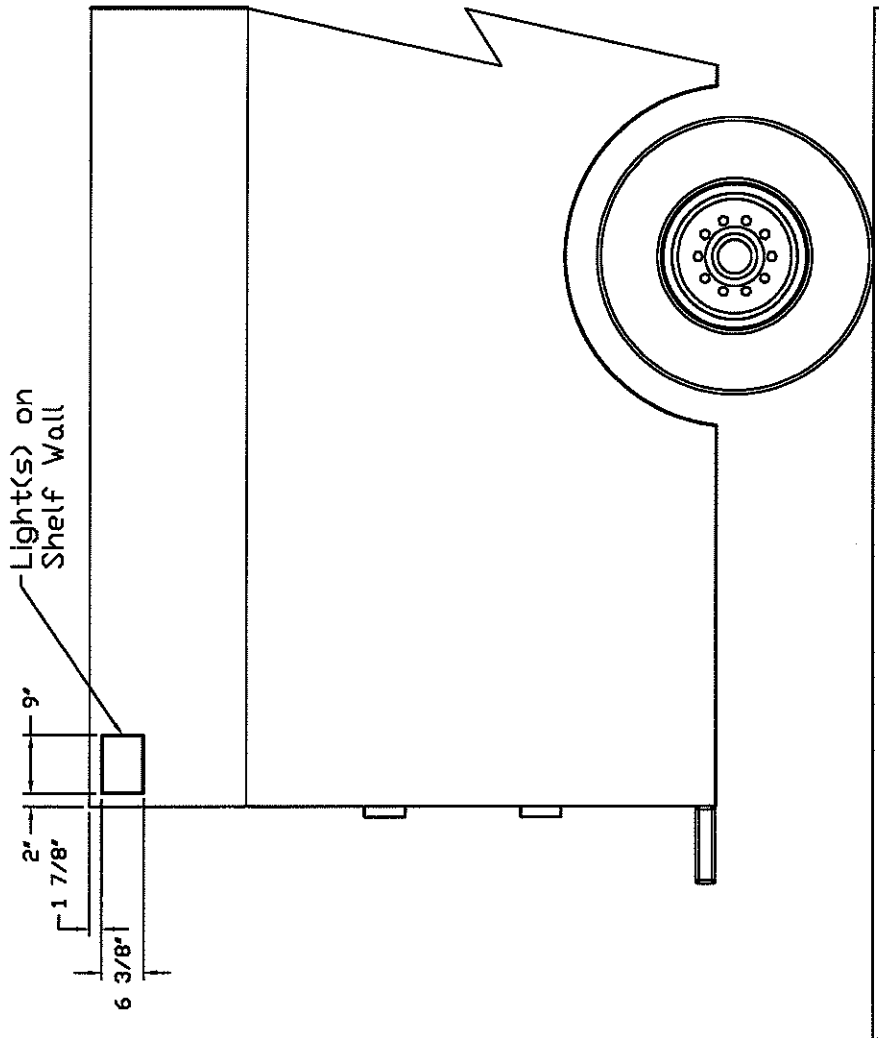


FIGURE 13A



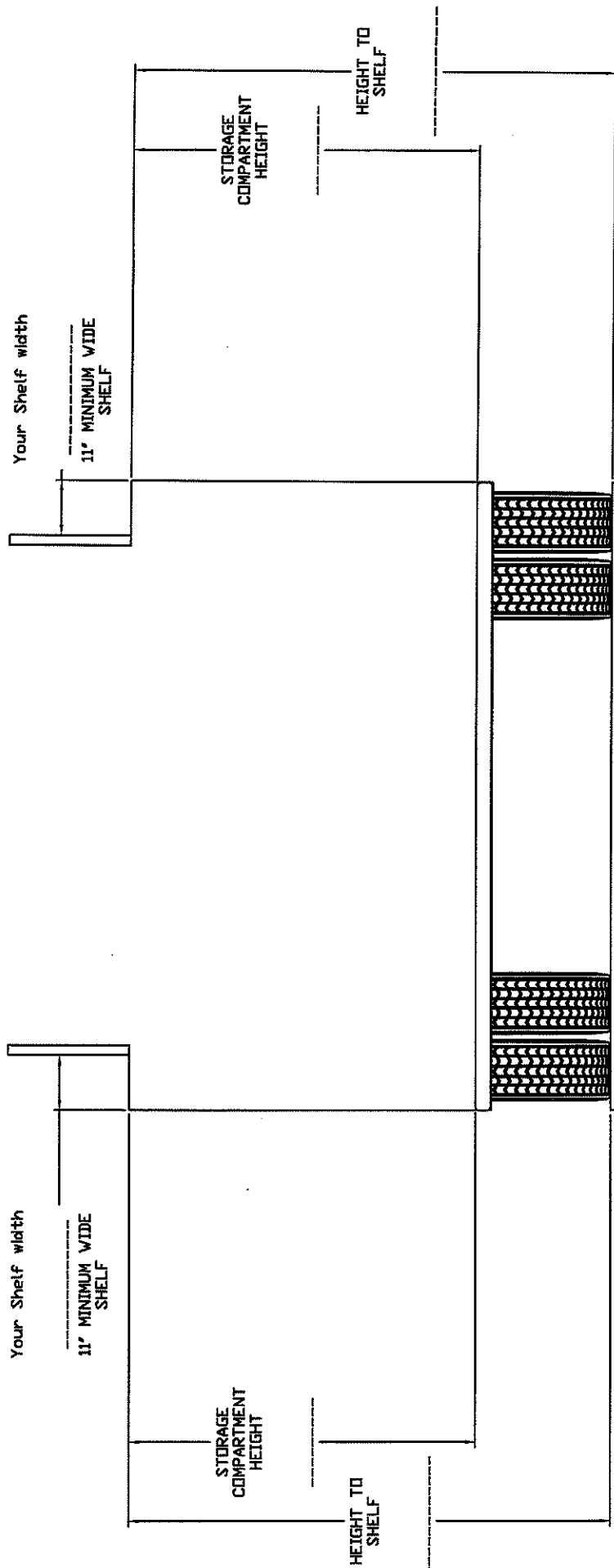
THREAD THE STRAP THROUGH THE
FOOTMAN'S LOOP & FASTEN THE
STRAP TO ITSELF WITH THE HOOK
AND LOOPS THAT ARE ON THE
SEWN TO THE STRAP.

FIGURE 13B



Example of a dimensioned rear and side of a truck

FIGURE 14A



Important! For proper clearance for handle placement, choose an option below and email the information to orders@ziamatic.com. Also include any lights or protrusions in the side of the vehicle.

- Option 1: Sketch and dimension all lights, license plate holders, equipment brackets, openings... Etc. in the figure above.
- Option 2: Take photo(s) of the back of the vehicle and dimension all lights, license plate holders, equipment brackets, openings... Etc.

email information to
orders@ziamatic.com

REAR VIEW OF VEHICLE
 FIGURE 14B

Mounting Instructions

WARNING: Before drilling into the apparatus body, confirm that there are no hidden wires, hydraulic/pneumatic lines, roll-up doors or other obstructions that could be damaged or cause injury during the drilling process.

WARNING: Do not paint the Gantry Main Rail (Figure 7 & 7A, Item 1). Anodizing is acceptable if color is required.

Important: For a proper handle configuration, the lights, license plate bracket, grab handles...etc. on the back of the apparatus must be located. See figures 14A & 14B for ways to document the apparatus before ordering the Ziamatic Hard Sleeve Gantry.

Apparatus information can be supplied by emailing to (orders@ziamatic.com) or faxing to (866-493-1401).

Preparing the Gantry Base Sub-Assembly

Hole Transfer for Base Plate 3093-400-123 attached to Base Assembly 3093-450-901:

1. Position the Gantry Base Plate (Figure 1, Top View and Figure 4, Item 2) on the apparatus shelf, leaving 1" between Gantry Base Plate and rear lip of shelf and 3" between Gantry Base Plate and adjacent side wall.
 2. Remove pin from the damper (Figure 4, Item 8) and tilt Gantry Tray Receiver (Figure 4, Item 1) so that top of Gantry Base Plate (Figure 4, Item 2) is accessible.
 3. Using the holes in the Gantry Base Plate (Figure 5, Item 2) as a template, drill 7 holes for 3/8" fasteners (not included). Do not fasten at this time.
 4. Reattach the damper (Figure 4, Item 8).
- B. Mounting the Gantry Tray Guide and Gantry Tray Assemblies (Figure 6, 7, & 8A)
1. Following the dimensions in Figure 1, position Gantry Tray Guides (Figure 6, Item 1) on apparatus shelf.

Note: Dimensions are referenced. The Guides can be moved slightly to align with supports or to avoid wire harnesses, etc. Also note that the Guide which is closer to the Anti-Torque and Stop Bracket is better closer to that bracket as opposed to be further away from it.

2. Slide the Gantry Tray Assembly (Figure 8B) into the rear of the Gantry Tray Receiver (Figure 4, Item 1). Confirm proper alignment between Gantry Tray Receiver and Gantry Tray Guides.
3. Remove Gantry Tray Assembly.
4. Using holes in each Gantry Tray Guide as a template, drill four holes for 1/4" fasteners (not included). Attach Gantry Tray Guides to apparatus using 1/4" fasteners.
5. Attach Gantry Base Plate (Figure 4, Item 2) to apparatus using 3/8" fasteners.

6. Slide the Gantry Tray Assembly back into Gantry Tray Receiver and Gantry Tray Guides.

C. Mounting the Gantry Handle Assembly and Bracket & Lock Striker Assembly

Important: Use caution that the handle does not swing into the apparatus before the Handle Guard is attached. That will be mounted in Step E.

1. Attach Gantry Pull Brackets to the Gantry Main Rail (Figure 9B).
2. Align the Bracket & Lock Striker Assembly (Figure 10A, Item 2) with the Gantry Pull Handle Lock (Figure 9A Item 8). See also Figure 10C.
3. Using the holes Bracket & Lock Striker Assembly (Figure 10A) as a template, drill two holes for 3/8" fasteners (not included). Attach Gantry Rod Catch to apparatus body using 3/8" fasteners.
4. Slide the Gantry assembly to the stored position. Make sure that the Red Cylinder Stops come in contact with the Gantry Tray Pivots. Make sure that the system is locked by pulling on the handle. If not, adjust the Thin Jam Nuts and the Full Threaded Studs so that system stays locked. (Figure 10D)
5. Align the Indicator Switch 3096-087-105 to Encased Neodymium Magnet 3096-087-103. (Figure 10E)
6. Mount the Indicator Switch to the vehicle Wall. (Figure 10E)
7. Connect the wires as per the schematic shown in (Figure 10F). Indicator Light is not supplied.

D. Mounting the Anti-Torque & Stop Bracket

1. With the Gantry Tray Assembly in the stored position, place the Anti-Torque & Stop Bracket (Figure 11A) on the apparatus shelf. Position the Anti-Torque & Stop Bracket with minimal clearance to the wear strip, (Figure 11B).
2. Using the holes in the Anti-Torque & Stop Bracket as a template, drill 3 holes for 3/8" fasteners (not included) and use 3/8" fasteners to secure to the deck.

E. Handle Guard Attachment (Figures 12A and 12B)

1. Having gantry in the stowed position and the Pull Handle in the locked position, position the Handle Guard on the apparatus in order to protect the apparatus from a swinging handle.
2. Using the Handle Guard as a template, drill for 3x #10 fasteners.
3. Attach the guard using 3x #10 flat head fasteners. (Not Supplied).

F. Surface Guard Attachment (Figure 13A)

1. Raise and lower the gantry and see if it gets close to the shelf wall.

2. Attach the Surface Guard 3093-450-153 to the shelf wall to protect the vehicle using 3/8" diameter hardware (not supplied).

Operation Instructions

A. Loading Hard Sleeves

1. Push the spring-loaded Control Balls on the Gantry Pull Handle downward to unlock the lock located within the handle assembly. (Figures 12A & 12B)
2. Pull the Gantry Pull Handle as you walk backwards. The Gantry Tray Assembly will begin to tilt down as it moves through the Gantry Tray Receiver.
3. Having the Gantry System in the down position, confirm that the strap is clear of Hose Trays by flipping it to the backside of the trays.
4. Slide a Hard Sleeve upward along the tray until it engages with the Gantry Hose Catch at the top end of the tray. Twisting the hose at the bottom may ease the hose ends past the tray brackets.
5. Rest the lower end of the hard sleeve in the tray against the Gantry Hose Stop.
6. Repeat for the other Hard Sleeve.
7. Use the strap to secure the hard sleeves in place. (Figure 13B)
8. Using the Gantry Pull Handle, lift the Gantry Tray Assembly until it is level with the apparatus shelf. Slide the Gantry Hose Tray into the Tray Receiver until contact is made with Bracket & Lock Striker Assembly.
9. Confirm that the Pull Handle is locked by tugging on it.

B. Unloading the Hard Sleeves

WARNING: When the hard sleeves are removed from the Gantry, the Gantry Tray will spring upward slightly. Use caution when removing hard sleeves from tray.

1. Push the spring-loaded Control Balls on the Gantry Pull Handle downward to unlock the lock located within the handle assembly. (Figures 12A & 12B)
2. Pull the Gantry Pull Handle as you walk backwards. The Gantry Tray Assembly will begin to tilt down as it moves through the Gantry Tray Receiver.
3. When Gantry Tray assembly is fully tilted down, remove the strap from hard sleeves.
4. Lift a lower ends of a hard sleeve and slide it down out of the Hose Tray.
5. Repeat for the other Hard Sleeve.

NOTES



Ziamatic Corp.

10 West College Avenue, P.O. Box 337, Yardley, PA 19067-0587 • (215) 493-3618 • FAX: (215) 493-1401

www.ziamatic.com

TOLL FREE: 800-711-3473

*ZICO is a registered trademark for fire, safety and marine products made by Ziamatic Corp.

Copyright Ziamatic Corp. 1-24