

INSTALLATION INSTRUCTIONS

MODELS: 201, 201HD, 202, 202HD, 203, 203IM, 204 & 205

USE ASTA DOOR CORPORATION PARTS ONLY - ALL OTHERS SHALL VOID WARRANTY

IMPORTANT REMARKS ALL ASTA PRODUCTS MUST BE INSTALLED BY A LICENSED, QUALIFIED PROFESSIONAL DOOR COMPANY TO QUALIFY FOR OUR WARRANTY. INSTALLATION WITHOUT PROPER TOOLS AND KNOWLEDGE CAN RESULT IN PERSONAL INJURY. THIS PAMPHLET IS DESIGNED TO ASSIST A PROFESSIONAL IN THE INSTALLATION OF ASTA 200 SERIES COMMERCIAL SHEET DOORS. SAFETY IS FOREMOST. INSTALLATION SHOULD BE EXECUTED BY LICENSED, QUALIFIED DOOR PROFESSIONALS. INSPECT ALL OF THE SHIPPED PARTS AND ACCOUNT FOR EVERYTHING BEFORE COMMENCING ANY WORK. FOR QUESTIONS AND TECHNICAL ASSISTANCE, CONTACT ASTA CUSTOMER SUPPORT AT (770) 974-2600.

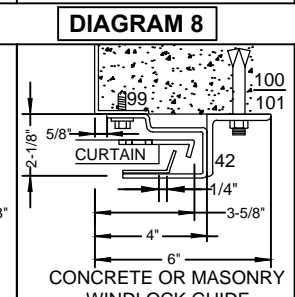
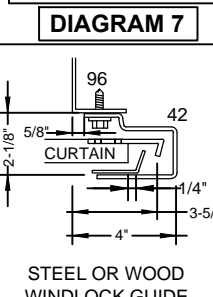
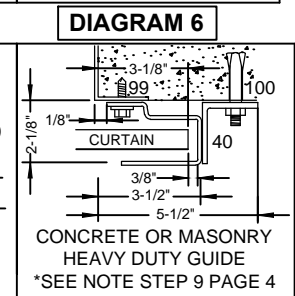
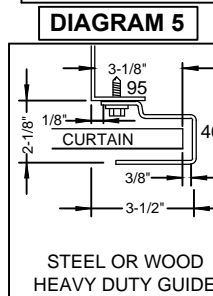
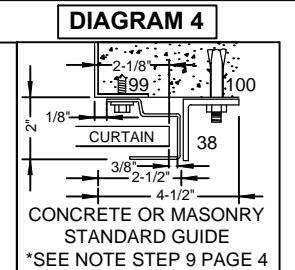
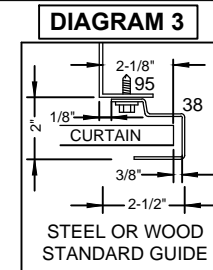
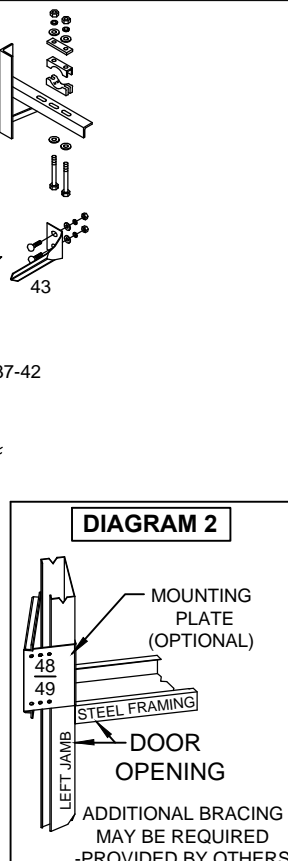
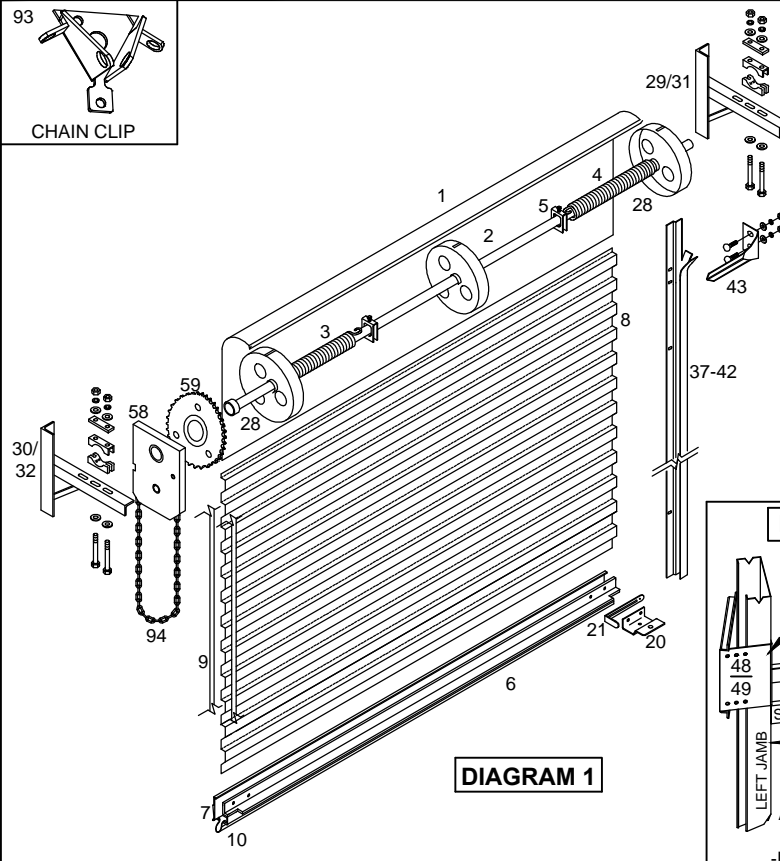
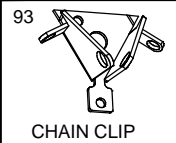
WARNING

MOVING DOOR CAN CAUSE SERIOUS INJURY OR DEATH
 KEEP CLEAR OF OPENING WHILE DOOR IS MOVING.



SAFETY INSTRUCTIONS

- DO NOT STAND OR WALK UNDER MOVING DOOR. KEEP DOOR IN FULL VIEW AND FREE OF OBSTRUCTION WHILE OPERATING.
 - DO NOT ALLOW CHILDREN TO OPERATE THE DOOR OR AUTOMATIC OPERATOR.
 - REPAIRS OR ADJUSTMENTS SHOULD BE MADE BY A TRAINED SERVICE PERSON USING PROPER TOOLS AND INSTRUCTIONS.
 - TO AVOID INJURY, DO NOT PUT FINGERS BETWEEN DOOR AND GUIDES.
 - READ OWNER'S MANUAL FOR YOUR DOOR AND OPERATOR FOR MORE INFORMATION.
- CAUTION:** USE CORRECT LIFTING PROCEDURES AND EQUIPMENT DURING INSTALLATION OF THIS PRODUCT TO AVOID INJURY OR DAMAGE.



PARTS LIST

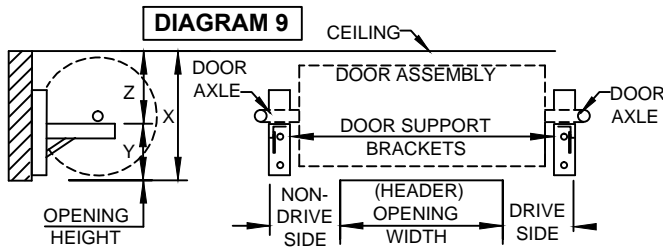
1	VARIABLES	TOP SHEET	37	VARIABLES	DOOR GUIDE, 16GA STANDARD-LH	70	730100-1	HEX HEAD BOLT, 3/8"-16x1-1/2" (INCLUDED)
2	VARIABLES	AXLE PIPE	38	VARIABLES	DOOR GUIDE, 16GA STANDARD-RH	71	750103-1	FLAT WASHER, 3/8" (INCLUDED)
3	VARIABLES	SPRING (LEFT HAND)	39	VARIABLES	DOOR GUIDE, 12GA HEAVY DUTY-LH	72	740103-1	HEX NUT, 3/8"-16 (INCLUDED)
4	VARIABLES	SPRING (RIGHT HAND)	40	VARIABLES	DOOR GUIDE, 12GA HEAVY DUTY-RH	73	440007-1	ELECTRIC OPERATOR (EO) KIT-NOT INSTALLED:
5	230003-1	SPRING CLAMP ASSEMBLY	41	VARIABLES	DOOR GUIDE, 12GA WINDLOCK-LH	74	440001-1	DRIVE SPROCKET, 41A72-9" (INCLUDED)
6	VARIABLES	BOTTOM ANGLE	42	VARIABLES	DOOR GUIDE, 12GA WINDLOCK-RH	75	750203-1	LOCK WASHER, 3/8" (INCLUDED)
7	VARIABLES	BOTTOM RETAINER	43	321105-0	REMOVABLE HEADSTOPS, PAIR	76	730100-1	HEX HEAD BOLT, 3/8"-16x1-1/2" (INCLUDED)
8	VARIABLES	CORRUGATED STEEL SHEET	44	740206-1	FLAT HEAD PHILLIPS BOLT, 5/16"-18x1	77	750103-1	FLAT WASHER, 3/8" (INCLUDED)
9	260000-1	CURTAIN SIDE WEAR STRIP, COMMERCIAL	45	740102-1	HEX NUT, 5/16"-18	78	740103-1	HEX NUT, 3/8"-16 (INCLUDED)
10	260004-F	BULB ASTRAGAL, BOTTOM WEATHERSEAL	46	750202-1	LOCK WASHER, 5/16"	79	420114-1	2000R-40 CHAIN HOIST ASSEMBLY:
11	310103-1	AXLE CLAMP	47	750102-1	FLAT WASHER, 5/16"	80	420105-1	DRIVE SPROCKET, 41A40-3" (INCLUDED)
12	310102-1	KEEPER PLATE, STANDARD 2 HOLE	48	310400-1	MOUNTING PLATES, 3/16" STANDARD PAIR	81	420111-1	ROLLER CHAIN, #41 x 3.9" (INCLUDED)
13	420101-1	KEEPER PLATE, EXTENDED 4 HOLE	49	310410-1	MOUNTING PLATES, 1/4" HEAVY DUTY PAIR	82	420107-1	MASTER LINK, #41 (INCLUDED)
14	770301-1	UBOLT, 3/8" - 16	MODELS 202, 202HD & 204 ONLY:			83	750203-1	LOCK WASHER, 3/8" (INCLUDED)
15	730103-1	HEX HEAD BOLT (GR5), 3/8"-24x3-1/2"	50	260303-1	INSULATION, DOUBLE FOIL	84	730100-1	HEX HEAD BOLT, 3/8"-16 x 1-1/2" (INCLUDED)
16	740104-1	HEX NUT, 3/8" - 24	51	260401-1	MYLAR TAPE, 2"	85	420114-2	2000R-72 CHAIN HOIST ASSEMBLY:
17	740103-1	HEX NUT, 3/8" - 16	52	630002-1	TOP DRAFT STOP, 2-1/2" WIDE	86	440001-1	DRIVE SPROCKET, 41A72-9" (INCLUDED)
18	750103-1	FLAT WASHER, 3/8"	53	850204-1	7/8" RETAINER FOR JAMB BRUSH SEAL	87	460698-1	ROLLER CHAIN, #41 x 4.6" (INCLUDED)
19	750203-1	LOCK WASHER, 3/8"	54	850211-1	2" JAMB BRUSH SEAL	88	420107-1	MASTER LINK, #41 x 4.6" (INCLUDED)
20	280301-1	DOOR STOP, LIFT CLIP	MODELS 203 & 204 ONLY:			89	750103-1	FLAT WASHER, 3/8" (INCLUDED)
21	280104-1	SLIDE BOLT LOCK	55	270501-1	WINDLOCK CLIP, COMMERCIAL	90	740103-1	HEX NUT, 3/8"-16 (INCLUDED)
22	730301-1	TRUSS HEAD SLOTTED BOLT, 1/4"-20x1-1/4"	56	720101-1	POP RIVET, 3/16"	91	750203-1	LOCK WASHER, 3/8" (INCLUDED)
23	740201-1	SELF LOCKING NUT, 1/4" - 20	57	270502-1	WINDLOCK BACKER PLATE, COMMERCIAL	92	730100-1	HEX HEAD BOLT, 3/8"-16 x 1-1/2" (INCLUDED)
24	750101-1	FLAT WASHER, 1/4"	DRIVE TYPES:			93	420300-2	HAND CHAIN RETAINER CLIP - STD ALL CHAIN HOIST
25	740102-1	HEX NUT, 5/16"-18	58	420103-1	4:1 POCKET WHEEL CHAIN HOIST ASSEMBLY:	94	420299-1	HAND CHAIN - OPEN LINK - STD ALL CHAIN HOIST
26	410102-1	ROPE, 1/4"	59	420105-1	DRIVE SPROCKET, 41A40-3" (INCLUDED)	FASTENERS:		
27	750104-1	FLAT WASHER, 1-7/16"	60	460699-1	ROLLER CHAIN, #41 x 1.9" (INCLUDED)	STEEL JAMBS:		
28	220300BB-1	12" DRUM ASSEMBLY w/ BEARING	61	420107-1	MASTER LINK, #41 (INCLUDED)	95	730702-1	TEK SCREW, #14x3/4" (GUIDE)
29	310200-1	STANDARD SUPPORT BRACKET, RH	62	260011-1	NYLON SPACER, BLACK (INCLUDED)	96	730703-1	TEK SCREW, #14x3/4" BUILDEX (GUIDE) - 203, 203IM & 204 ONLY
30	310300-1	STANDARD SUPPORT BRACKET, LH	63	750203-1	LOCK WASHER, 3/8" (INCLUDED)	WOOD JAMBS:		
31	310200-1HD	HEAVY DUTY SUPPORT BRACKET, RH	64	730100-1	HEX HEAD BOLT, 3/8"-16x1-1/2" (INCLUDED)	97	730403-1	WOOD LAG SCREW, 1/4"x2" (GUIDE)
32	310300-1HD	HEAVY DUTY SUPPORT BRACKET, LH	65	420104-1	8:1 POCKET WHEEL CHAIN HOIST ASSEMBLY:	98	730402-1	WOOD LAG SCREW, 3/8"x2" (BRACKET)
33	310500-1	EXTENDED STANDARD SUPPORT BRACKET, RH	66	440001-1	DRIVE SPROCKET, 41A72-9" (INCLUDED)	MASONRY JAMBS:		
34	310510-1	EXTENDED STANDARD SUPPORT BRACKET, LH	67	460700-1	ROLLER CHAIN, #41x3.2 (INCLUDED)	99	760203-1	TAPCON SCREW, 1/4"x1-3/4" (GUIDE-NO CLIPS)
35	310500-1HD	EXTENDED HEAVY DUTY SUPPORT BRACKET, RH	68	420107-1	MASTER LINK, #41 (INCLUDED)	100	760102-1	SLEEVE ANCHOR, 1/2"x2-1/4" (GUIDE & BRACKET)
36	310510-1HD	EXTENDED HEAVY DUTY SUPPORT BRACKET, LH	69	750203-1	LOCK WASHER, 3/8" (INCLUDED)	101	760104-1	SLEEVE ANCHOR, 1/2"x3" (GUIDE & BRACKET) - 203IM ONLY



DO NOT CUT THE BANDS WHICH HOLD THE DOOR IN A ROLL. YOU WILL BE TOLD AT A LATER TIME EXACTLY WHEN TO CUT THEM. NO GUARANTEE WILL BE GIVEN OR RESPONSIBILITY ACCEPTED BY THE MANUFACTURER IF THE DOOR IS NOT INSTALLED AS INSTRUCTED. FOR PROPER OPERATION, FOLLOW THE INSTRUCTIONS AS GIVEN. PLEASE REVIEW ALL THE STEPS BEFORE BEGINNING.

STEP #1 - PREPARATION

- CHECK THE HEIGHT AND WIDTH OF THE DOOR OPENING.
- CHECK IF THE DOOR JAMBS ARE PLUMB.
- CHECK IF THE FLOOR AND HEADER ARE LEVEL.
- CHECK THE CLEARANCE CHARTS FOR SIDE ROOM AND HEAD ROOM REQUIREMENTS. (SEE DIAGRAM 9)



CLEARANCE REQUIREMENTS			
HEADROOM			
HEIGHT	X	Y	Z
UP TO 8'	20"	9-1/2"	10-1/2"
UP TO 10'	21"	10"	11"
UP TO 16'	23"	11"	12"
UP TO 20'	24"	12"	12"

NOTE: "Z" DIMENSION INCLUDES 2" TO ALLOW THE BOTTOM ANGLE TO PASS WHEN SPINNING THE DOOR TO PRETENSION THE SPRINGS. IF HEADROOM IS LIMITED YOU CAN DEDUCT 2" FROM "Z" AND TENSION SPRING USING A PIPE WRENCH OR THE CHAIN HOIST.

NOTE: RIGHT HAND DRIVE SHOWN, LEFT HAND OPPOSITE.

SIDE ROOM (PER SIDE) - OUTSIDE BRACKET

MODEL 201 & 202	DRIVE SIDE	NON-DRIVE SIDE
PUSH-UP / ROPE	6"	6"
4:1 OR 8:1 POCKET WHEEL HOIST	9"	6"
2000R-40 OR 72 CHAIN HOIST	7-1/2"	6"
ELECTRICAL OPERATOR	7-1/2"	6"
PER SIDE		
BACK OF GUIDE	2-1/2"	
END OF AXLE	9"	
MODEL 201HD & 202HD	DRIVE SIDE	NON-DRIVE SIDE
PUSH-UP / ROPE	7"	7"
4:1 OR 8:1 POCKET WHEEL HOIST	9"	7"
2000R-40 OR 72 CHAIN HOIST	7-1/2"	7"
ELECTRICAL OPERATOR	7-1/2"	7"
PER SIDE		
BACK OF GUIDE	3-1/2"	
END OF AXLE	11"	
MODEL 203 & 203IM & 204	DRIVE SIDE	NON-DRIVE SIDE
PUSH-UP / ROPE	7-1/2"	7-1/2"
4:1 OR 8:1 POCKET WHEEL HOIST	9"	7-1/2"
2000R-40 OR 72 CHAIN HOIST	7-1/2"	7-1/2"
ELECTRICAL OPERATOR	7-1/2"	7-1/2"
PER SIDE		
BACK OF GUIDE	4"	
END OF AXLE	11"	

STEP #2 - INSTALL SUPPORT BRACKETS

- MARK THE HORIZONTAL POSITION OF THE SUPPORT BRACKETS (29-36).
- MARK THE VERTICAL DIMENSION OF THE SUPPORT BRACKET (DIMENSION "Y") BY USING A TRANSIT OR WATER LEVEL. **THE DOOR MUST BE LEVEL.**
- DRILL HOLES AND FASTEN THE BRACKETS WITH THE PROPER WALL FASTENERS REQUIRED TO OBTAIN A SOLID MOUNTING. USE THROUGH BOLTS ON SOFT BLOCK OR BRICK.
- VERIFY THE MINIMUM HEADROOM REQUIREMENT, DIMENSION "X." IF INSUFFICIENT, LOWER THE BRACKETS UNTIL "Z" IS OBTAINED. IF THE BRACKET IS LOWERED BY MORE THAN 2" THIS WILL REDUCE THE OPENING HEIGHT. THE GUIDE HEIGHT SHOULD BE REDUCED ACCORDINGLY.

STEP #3 - DRIVE INSTALLATION

- INSTALL ROPE (IF REQUIRED) AS FOLLOWS:**
 - THREAD 1/4" ROPE THROUGH HOLE PROVIDED IN THE CENTER OF THE BOTTOM ANGLE.

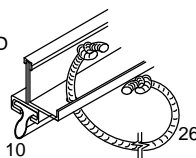


DIAGRAM 10

- INSTALL THE 4:1 POCKET WHEEL REDUCTION GEAR CHAIN HOIST (IF EQUIPPED) AS FOLLOWS:**

- INSTALL DRIVE SPROCKET (59) ON PREFERRED SIDE USING 3/8" - 16 x 1-1/2" HEX BOLT (64) AND 3/8" LOCK WASHER (63).
- REMOVE SPRING CLAMP ON DRIVE SIDE AND DISCARD. SLIDE NYLON SPACER (62) ONTO DOOR AXLE.
- SLIDE POCKET WHEEL ASSEMBLY (58) ONTO DOOR AXLE AND ALIGN SPROCKETS PARALLEL TO EACH OTHER.
- CONNECT DRIVE CHAIN (60) AROUND BOTH SPROCKETS USING THE MASTER LINK (61) PROVIDED.
- AFTER THE DOOR TENSION HAS BEEN ADJUSTED (STEP 6), TIGHTEN SET SCREWS ON POCKET WHEEL ASSEMBLY.

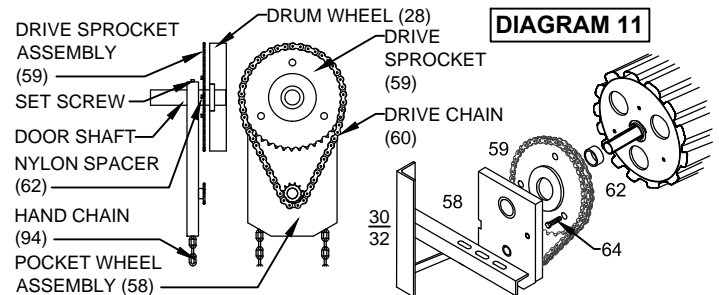


DIAGRAM 11

- INSTALL THE 8:1 POCKET WHEEL REDUCTION GEAR CHAIN HOIST (IF EQUIPPED) AS FOLLOWS:**

- INSTALL DRIVE SPROCKET (66) ON PREFERRED SIDE USING 3/8" - 16 x 1-1/2" HEX BOLT (70) AND 3/8" LOCK WASHER (69), 3/8" FLAT WASHER (71) & 3/8" - 16 HEX NUT (72) PROVIDED.
- DO NOT REMOVE SPRING CLAMP (5) OR FLAT WASHER (27) THAT HOLDS DOOR IN POSITION ON THE DOOR AXLE.
- SLIDE POCKET WHEEL ASSEMBLY (65) ONTO DOOR AXLE AND ALIGN SPROCKETS PARALLEL TO EACH OTHER.
- CONNECT DRIVE CHAIN (67) AROUND BOTH SPROCKETS USING THE MASTER LINK (68) PROVIDED.
- AFTER THE DOOR TENSION HAS BEEN ADJUSTED (STEP 6), TIGHTEN SET SCREWS ON POCKET WHEEL ASSEMBLY.

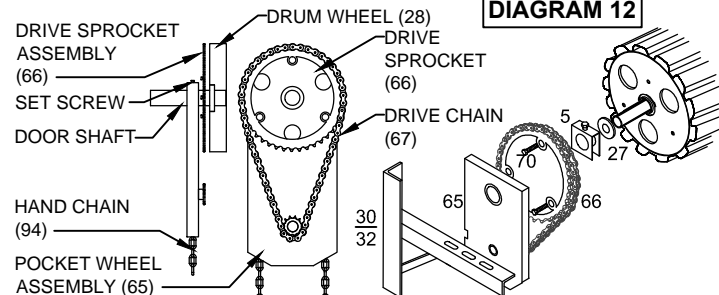


DIAGRAM 12

- INSTALL ELECTRIC OPERATOR KIT (IF EQUIPPED) AS FOLLOWS:**

- INSTALL E.O. SPROCKET (74) TO THE END DRUM OF DOOR ON PREFERRED SIDE USING 3/8"-16 x 1-1/2" HEX BOLT (76), 3/8"-16 HEX NUT (78) AND 3/8" LOCK WASHER (75), 3/8" FLAT WASHER (77)
- SLIDE FLAT ROUND WASHER (27) AND SPRING CLAMP ASSEMBLY (5) ONTO DOOR AXLE AND SECURE SET SCREW WITH CLAMP AND WASHER AGAINST BEARING AND END OF DRUM. (SEE DIAGRAM 13)

- INSTALL 2000R-72 OR 40 REDUCTION GEAR CHAIN HOIST (IF EQUIPPED) AS FOLLOWS:**

- INSTALL DRIVE SPROCKET ON CORRECT SIDE FOR EXTENDED BRACKET USING 3/8" - 16 x 1 1/2" HEX BOLT (84), 3/8" LOCK WASHER (83), 3/8" FLAT WASHER (89) (2000R-72 ONLY) AND 3/8" - 16 HEX NUT (90) (2000R-72 ONLY).
- INSTALL CHAIN HOIST ASSEMBLY ON TO THE HOIST SUPPORT ANGLES USING 3/8" - 16 x 1 1/2" HEX BOLT (84), 3/8" LOCK WASHER (83), 3/8" FLAT WASHER (89) AND 3/8"-16 HEX NUTS (90) AS SHOWN. (SEE DIAGRAM 14/15)
- ALIGN BOTH SPROCKETS PARALLEL WITH EACH OTHER.
- CONNECT DRIVE CHAIN (81/87) AROUND BOTH SPROCKETS USING MASTER LINK (82/88) PROVIDED.

NOTE: REFERENCE DIAGRAM 14 FOR 2000R-40 & DIAGRAM 15 FOR 2000R-72 CHAIN HOIST.

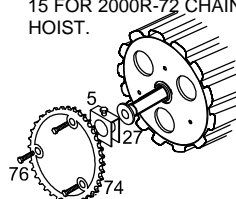


DIAGRAM 13

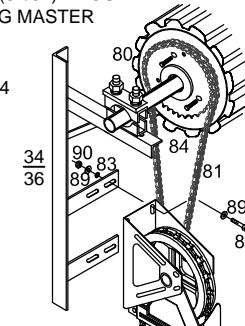


DIAGRAM 14

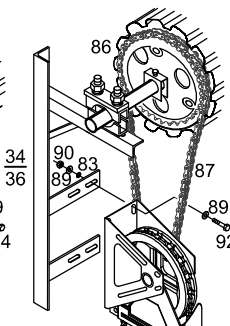


DIAGRAM 15

STEP #4 - POSITION DOOR ASSEMBLY

- A. PLACE THE AXLE CLAMP (11) ONTO DOOR SUPPORT BRACKET. LIFT THE DOOR ASSEMBLY UP ONTO THE SUPPORT BRACKET. (SEE DIAGRAM 16).

NOTE:

- POSITION THE DOOR AS CLOSE TO THE HEADER AS POSSIBLE. ALLOW ROOM TO SPIN THE DOOR. DO NOT ALLOW THE DOOR CURTAIN TO SCRAPE THE HEADER.
- **DO NOT USE FORKLIFTS OR GENIE LIFTS WITH UNPROTECTED ARMS/FORKS. THIS CAN CAUSE IRREPARABLE DAMAGE TO DOOR CURTAIN.**

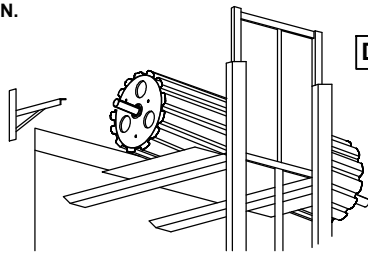
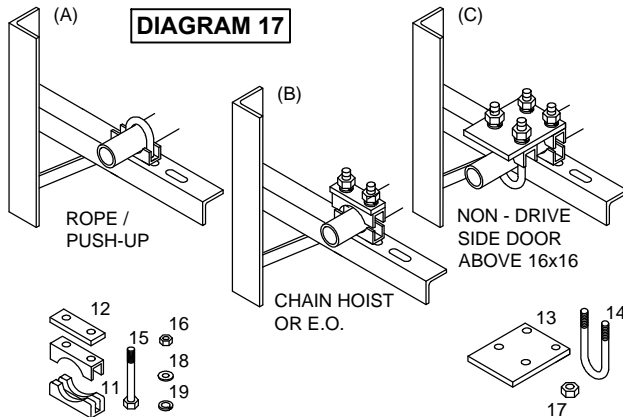


DIAGRAM 16

STEP #5 - INSTALL AXLE HARDWARE

A. MANUAL PUSH-UP/ROPE DRIVE:

1. PLACE THE AXLE CLAMP (11) ONTO HORIZONTAL MEMBER OF THE SUPPORT BRACKET (29-36) AND UNDER THE DOOR AXLE.
2. PLACE 3/8" U-BOLT (14) OVER DOOR AXLE AND THROUGH AXLE CLAMP.
3. FASTEN U-BOLT USING 3/8" NUT (17), 3/8" FLAT WASHER (18) AND 3/8" LOCK WASHER (19)---TIGHTEN SECURELY.



B. DRIVE SIDE FOR REDUCTION DRIVE CHAIN HOIST AND E.O. KITS.:

1. PLACE THE AXLE CLAMP (11) ONTO HORIZONTAL MEMBER OF THE SUPPORT BRACKET (29-36) AND UNDER THE DOOR AXLE.
2. PLACE AXLE CLAMP (11) AND STANDARD KEEPER PLATE (12) ON TOP OF THE DOOR AXLE AS SHOWN.
3. FASTEN AXLE CLAMPS AND STANDARD KEEPER PLATE TOGETHER USING 3/8"x3-1/2" HEX BOLTS (15), 3/8" LOCK WASHERS (19), 3/8" FLAT WASHERS (18), AND 3/8" NUTS (FINE THREAD) (16)---TIGHTEN SECURELY.

NOTE:

- REQUIRES A MINIMUM OF 40 LBS...TORQUE TO PROPERLY SECURE HARDWARE

NOTE:

- EXTENDED KEEPER PLATE (13) SUPPLIED FOR DOORS ABOVE 16 x 16 ONLY

C. FOR INSTALLATION ON NON-DRIVE SIDE FOR REDUCTION DRIVE CHAIN HOIST AND E.O. KITS:

1. PLACE THE AXLE CLAMP (11) ONTO HORIZONTAL MEMBER OF THE SUPPORT BRACKET (29-36) AND UNDER THE DOOR AXLE.
2. PLACE AXLE CLAMP (11) AND STANDARD KEEPER PLATE (13) ON TOP OF THE DOOR AXLE AS SHOWN.
3. FASTEN AXLE CLAMPS USING 3/8"x3-1/2" HEX BOLTS (15) 3/8"-24 NUTS (FINE THREAD) (16), 3/8" FLAT WASHERS (18), 3/8" LOCK WASHERS (19) AS SHOWN. TIGHTEN SECURELY.

- D. LOCATE AXLE HARDWARE AS SHOWN FOR FINAL POSITION. (SEE DIAGRAM 18)

UP TO"	"A" DIMENSION
10' HIGH	9-1/4"
12' HIGH	10"
14' HIGH	10-1/2"
16' HIGH	11-1/8"
18' HIGH	11-3/4"
20' HIGH	12-1/4"

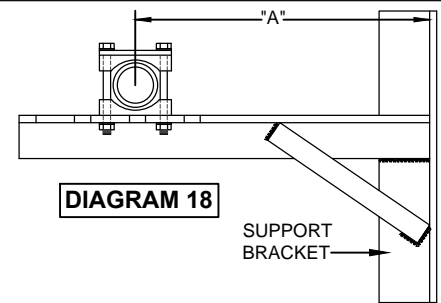


DIAGRAM 18

NOTE:

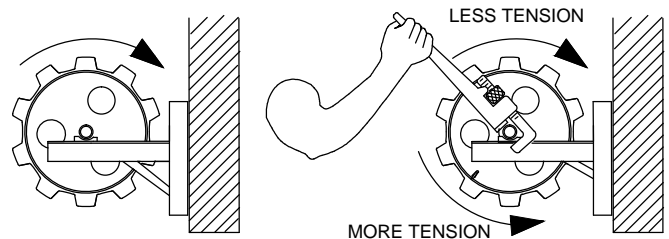
1. DIMENSIONS ARE APPROXIMATE POSITION FOR OPTIMAL PERFORMANCE. ADJUST BY MODEL AS NEEDED.
2. TO SPIN DOOR FOR PRE-TENSIONING SPRINGS, MIGHT REQUIRE MOVING THE DOOR AWAY FROM THE WALL TO ALLOW BOTTOM BAR TO PASS. IF SO, LOOSEN HARDWARE ONE SIDE AT A TIME & SLIDE DOOR AXLE TOWARD WALL TO ITS BEST POSITION. BE CAREFUL DOOR WILL BE UNDER TENSION.

STEP #6 - PRE-TENSION SPRINGS

- A. INSTALL CHAIN CLIP (93) APPROXIMATELY 4'-0" ABOVE FLOOR ON CHAIN OPERATED DOORS. INSTALLATION MUST BE SECURE.
- B. APPLY PRE-TENSION TO THE SPRINGS BY ROTATING THE DOOR TWO (2) TURNS IN A FORWARD DIRECTION (SEE DIAGRAM 19). THE BOTTOM ANGLE IS TO BE IN A 6 O'CLOCK POSITION.

DIAGRAM 19

DIAGRAM 20



- C. IF YOU'RE UNABLE TO ROTATE DOOR TO PRE-TENSION, USE A PIPE WRENCH TO ROTATE AXLE IN OPPOSITE DIRECTION. WITH ONE PERSON ON EACH SIDE OF DOOR, EACH PERSON SHOULD FIRMLY PLACE A LARGE PIPE WRENCH ON THE DOOR AXLE (SEE DIAGRAM 20). PULL DOWN TO APPLY TENSION INCREMENTALLY UNTIL YOU ACHIEVE TWO FULL ROTATIONS OF THE DOOR AXLE. THEN TIGHTEN THE AXLE HARDWARE.
- D. REPEAT STEP "C" IF ADJUSTMENT IS NECESSARY.

STEP #7 - CUT THE BANDS

WARNING: THE DOOR IS NOW UNDER TENSION. BEFORE CUTTING THE BANDS, TAKE HOLD OF THE DOOR ROLL BY THE BOTTOM ANGLE.

- A. CUT THE BANDS AND BRING THE CURTAIN DOWN NO FURTHER THAN 1/4 THE HEIGHT OF THE DOOR OPENING. SECURE CHAIN OVER THE CHAIN RETAINER OR WEDGE A WOOD PROP BETWEEN THE BOTTOM ANGLE AND THE DOOR ROLL TO PREVENT UPWARD TRAVEL.

STEP #8 - INSTALL DOOR STOPS (LIFT CLIPS) AND SLIDE BOLT LOCKS

- A. INSTALL THE DOOR STOPS (20) AND THE SLIDE BOLT LOCKS (21) USING 1/4"x1-1/4" TRUSS HEAD BOLT (22), 1/4" FLAT WASHER (24), 5/16" NUT (25), AND 1/4" SELF LOCKING NUT (23) PER SIDE.
- B. ELECTRONICALLY OPERATED DOORS STILL REQUIRE DOOR STOPS (LIFT CLIPS) TO BE INSTALLED. SLIDE BOLT LOCKS SHOULD NOT BE INSTALLED UNLESS ELECTRICAL INTERLOCKS ARE USED.
- C. WINDLOCK "CERTIFIED" DOORS (203, 203IM & 204) REQUIRE SLIDE BOLT LOCKS TO BE INSTALLED FOR PROPER WINDLOAD PROTECTION. ELECTRICAL INTERLOCKS ARE HIGHLY RECOMMENDED.

NOTE:

- WHEN INSTALLING SLIDE BOLT LOCKS THE THREADS FROM THE TRUSS HEAD BOLTS PROTRUDING FROM THE SELF LOCKING NUT SHOULD BE REMOVED TO A FLUSH POSITION WITH SELF LOCKING NUT TO PREVENT DOOR FROM HANGING UP ON THE HEAD STOPS. CLAMP A PAIR OF VICE GRIPS ON TO THE THREAD AND BREAK OFF, IF NECESSARY.

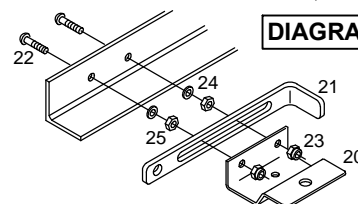


DIAGRAM 21

STEP #9 - INSTALL DOOR GUIDES

- INSTALL HEADSTOPS AS SHOWN IN DIAGRAM 22 ON EACH GUIDE USING THE 5/16" - 18 x 1" BOLTS (44), 5/16" LOCK WASHERS (46), 5/16" FLAT WASHERS (47) AND 5/16" - 18 NUTS (45) PROVIDED.
- THE HEAD STOPS ON THE GUIDES SHOULD BE NO MORE THAN 1" HIGHER (TO BOTTOM OF STOPS) THAN THE DOOR HEADER. IF NOT, CUT THE BOTTOM OF THE GUIDES TO MATCH YOUR OPENING HEIGHT AND RELOCATE SLIDE BOLT NOTCH AT BOTTOM OF GUIDE.
- MODELS 201, 201HD, 202, 202HD AND 205: RAISE THE DOOR CURTAIN SO THE BOTTOM ANGLE IS APPROXIMATELY 3" BELOW THE HEADER. SLIDE THE GUIDE OVER THE DOOR CURTAIN AND POSITION AGAINST THE DOOR OPENING ALLOWING 3/8" CLEARANCE FROM THE EDGE OF CURTAIN TO INSIDE THE GUIDE.

- INSTALL THE FASTENERS, LOWER CURTAIN INTO GUIDES SLOWLY, MAINTAINING PROPER CLEARANCE AND STOP 6" ABOVE THE FLOOR. INSTALL BOTTOM FASTENERS. CHECK IF THE GUIDES ARE PLUMB USING A LEVEL. THE FASTENERS SHOULD BE LOCATED APPROXIMATELY EVERY 24" STARTING 6" FROM THE FINISHED FLOOR. INSTALL BALANCE OF FASTENERS AND BEND THE LEAD-IN AT THE TOP OF THE GUIDE TO 45-DEGREE ANGLE.

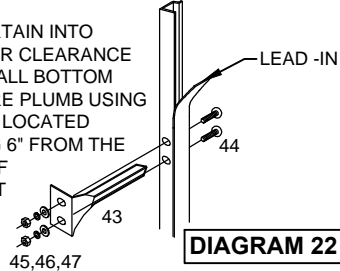


DIAGRAM 22

- MODEL 203, 203IM & 204: USE THE SAME PROCEDURE AS ABOVE ALLOWING 1/4" CLEARANCE BETWEEN CURTAIN AND THE WINDLOCK SPUR. BE SURE THERE IS SUFFICIENT CLEARANCE FOR THE WINDLOCK CLIPS TO ENTER THE GUIDES.
- FOR "WINDLOAD CERTIFIED DOORS" REFER TO SHOP DRAWING FOR FASTENER/ANCHOR TYPE AND FREQUENCY.
- SPRAY SILICONE LUBRICANT IN THE GUIDES FOR EASE OF OPERATION.

NOTE:

- DOORS ORDERED FOR CONCRETE/MASONRY APPLICATIONS WILL INCLUDE 1/4"x1-3/4" TAPCONS (99) FOR GUIDE INSTALLATION. BLOCK CLIPS WELDED TO THE BACK OF GUIDE FOR CONCRETE/MASONRY APPLICATION ARE OPTIONAL ON MODELS 201, 201HD, 202, 202HD AND 205. BLOCK CLIPS ARE THE STANDARD ON CONCRETE/MASONRY APPLICATION ON ALL MODELS 203, 203IM AND 204.

STEP #10 - CHECK AND ADJUST BALANCE

IF DOOR LOWERS EASILY AND RAISES HARD, MORE TENSION IS REQUIRED. IF THE DOOR LOWERS HARD AND RAISES EASILY, LESS TENSION IS REQUIRED. (SEE DIAGRAM 20)

CAUTION: FOR ALL DOOR DRIVES: BEFORE ADJUSTING THE SPRINGS, RAISE THE DOORS INTO THE OPEN POSITION. SECURE THE DOOR BY THE FOLLOWING METHODS:

- TIE ROPE AROUND THE DOOR ROLL.
- PLACE A CLAMP AT THE TOP OF THE GUIDE CHANNEL TO SECURE THE CURTAIN IN THE GUIDES.

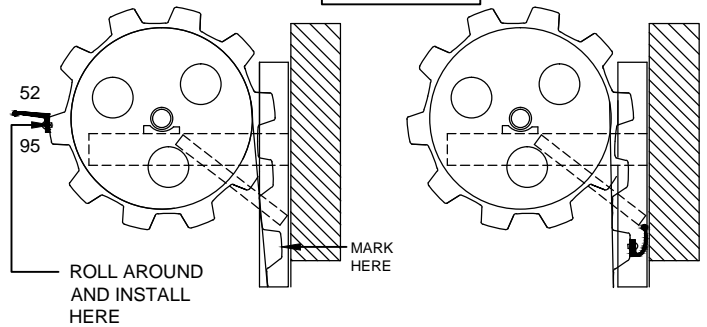
WARNING: WHEN AXLE CLAMPS ARE LOOSENEED, THE SPRINGS WILL BE VERY STRONG. YOU WILL NEED TWO PEOPLE TO ADJUST THE DOOR TENSION SAFELY.

- EACH PERSON SHOULD FIRMLY PLACE A LARGE PIPE WRENCH ON THE AXLE (SEE DIAGRAM 20). LOOSEN THE AXLE CLAMPS AND PULL DOWN FOR MORE TENSION AND UP FOR LESS TENSION. FOR POCKET WHEEL REDUCTION DRIVE DOORS, REMEMBER TO LOOSEN SET SCREWS PRIOR TO ADJUSTMENT AND RETIGHTEN SECURELY AFTER ADJUSTMENT.
- RETIGHTEN THE AXLE CLAMP HARDWARE.
- REPEAT ABOVE STEPS IF FURTHER ADJUSTMENT IS NECESSARY. BEGIN AT STEP 6B.

STEP #11 - INSTALL TOP DRAFT STOP

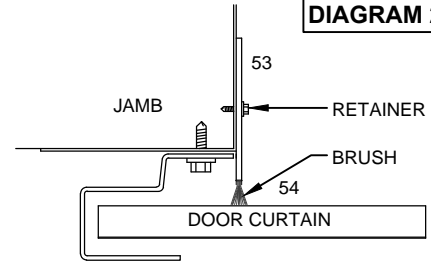
- TOP DRAFT STOP COMES STANDARD WITH MODELS 202, 202HD AND 204 INSULATED DOORS. PULL DOOR DOWN AND LOCK DOOR. GO OUTSIDE AND MARK A LINE ON THE DOOR CURTAIN AS SHOWN (SEE DIAGRAM 23)
- RAISE DOOR 2'-6" FROM FLOOR, OR UNTIL MARK IS ACCESSIBLE. PLACE TOP DRAFT STOP (52) IN POSITION AS SHOWN AND SECURE WITH TEK SCREWS. STRETCH RUBBER SLIGHTLY AND SECURE OTHER END. LOCATE AND INSTALL THE REMAINDER OF TEK SCREWS AT 12" O.C.

DIAGRAM 23



STEP #12 - INSTALL JAMB BRUSH SEAL

DIAGRAM 24



- A 7/8" ALUMINUM RETAINER (53) AND 2" BRUSH (54) COMES STANDARD WITH MODELS 202, 202HD AND 204.
- INSERT BRUSH INTO RETAINER. LINE UP RETAINERS ALONG JAMB SO THAT BRUSH SEAL FILLS THE DOOR CORRUGATION WHEN DOOR IS IN THE CLOSED POSITION. ATTACH RETAINER TO JAMB USING APPROPRIATE FASTENERS AT 6" FROM FLOOR AND HEADER AND 24" CENTERS MINIMUM.

SERVICE AND MAINTENANCE HINTS

- DOOR CURTAIN DRAGS IN GUIDES :**
 - CHECK DOOR SUPPORT BRACKETS FOR PLUMB.
 - ADJUST LOCATION OF GUIDES FOR 3/8" - 1/4" SIDE CLEARANCE, TOP AND BOTTOM.
 - DOOR DRUM ASSEMBLY MAY BE SET TOO CLOSE OR TOO FAR FROM WALL. NOTE: SLOTTED BRACKETS FOR ADJUSTMENT. (SEE DIAGRAM 18)
 - CHECK GUIDES FOR FOREIGN MATTER, SUCH AS DIRT, ETC.
 - CHECK FOR DAMAGED GUIDES.
 - ADJUST LEAD-IN BEND AT TOP INSIDE OF GUIDES.
- DOOR OPERATES HARD IN ONE DIRECTION :**
 - CHECK ALL THE ABOVE POINTS.
 - RECHECK STEP NO. 10.
- CHAIN JUMPS OFF CHAIN GEAR :**
 - ON ELECTRIC OPERATOR DOORS OR CHAIN HOIST DOORS, CHECK FOR SPROCKET ALIGNMENT AND PROPER CHAIN.
- DOOR DOES NOT CONTACT FLOOR LEVEL :**
 - USE SPIRIT LEVEL TO CHECK WHETHER DOOR OR FLOOR IS OFF LEVEL. IF DOOR IS OUT OF LEVEL, PROCEED TO CHECK THE FOLLOWING POINTS.
 - CHECK IF "SUPPORT BRACKETS" AND GUIDES ARE LEVEL AND PLUMB.
 - IF "A" AND "B" CHECK OUT, ROLL DOOR ALL THE WAY UP AND DOWN. SEE IF CURTAIN ROLLS UP STRAIGHT ON TO DRUMS. END OF DOOR SHOULD BE SQUARE. IF CONE SHAPED, GO TO STEP 5.
- DOOR DOES NOT ROLL UP STRAIGHT :**
 - CHECK ALL POINTS IN SEC. 1.
 - AN ALTERNATIVE SOLUTION TO CORRECT THE CONING DOOR IS TO LOWER CURTAIN TO THE FLOOR AND DETERMINE WHICH SIDE OF THE BOTTOM ANGLE TOUCHES THE FLOOR FIRST.
 - RAISE THE DOOR TO THE OPEN POSITION. SECURE THE HAND CHAIN AND REMOVE GUIDES. LOWER CURTAIN DOWN TO FLOOR LEVEL.
 - INSTALL A DRUM WEDGE ON SIDE OF DOOR WHICH THE BOTTOM ANGLE TOUCHED FIRST. PROCEED TO STEP 9.