SUPPLEMENT INSTRUCTIONS DEF (See back page index)



MARTIN DOOP

MARTIN GARAGE DOORS

SUPPLEMENT D-I

HIGH CLEARANCE / HI-LIFT TRACK SYSTEM

FOR 400-54 HI-LIFT CABLE DRUMS ONLY SEE PAGES 3 TO 8 FOR ALL OTHER HI-LIFT CABLE DRUMS.

The following instructions on pages 1 and 2 (also NOTE on page 3) are to be read with the regular instruction manual. Read both instructions complete before starting the installation.

STEP 1

Follow the regular instruction manual.

STEP 2

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See "High Clearance / Hi-Lift Tracks Systems Information Chart" on page 8 in this supplement.

STEPS 3 to 8

Follow the regular instruction manual.

STEP 9

If this door has an outside lock handle the roller bracket below the top roller bracket must be at least a #6, if not the outside T-Lock Handle may hit the header as the door is being raised. See "Outside T-Lock Handle Track Modification" on page 6 in this supplement.

OPTIONAL

PUNCHED

HORIZONTAL

TRACK

ANGI F

STEPS 10 to 16

Follow the regular instruction manual.

STEP 17

NOTE: If the Hi-Lift track system was not factory ordered read "MAKING HI-LIFT TRACKS FROM REGULAR TRACK ASSEMBLIES" on page 6 in this supplement.

Follow the regular instruction manual and the additional instructions as follows:

- A. Loosen the 1/4" bolts and nuts in the horizontal track and slide the horizontal track angle as far froward as possible. Re-tighten the 1/4" bolts and nuts.
- B. Fasten splice plate extensions to the upper flags. (See Page 13)
- C. Fasten the bottom of the Hi-Lift tracks to the flag splice plates. Fasten the upper flags to the top of the Hi-Lift tracks, then fasten the flags to the jambs, straight up (plumb) keeping both flags in line and level with each other. The measurement from the top of the vertical tracks to the fastening hole in the upper flag and the front of the horizontal track angle is the length of the Hi-Lift tracks plus 12 1/2" (318).
- D. Use a rope or some other method to temporarily hold the back of the horizontal tracks in place.
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STEP 17 CONTINUED



SUPPLEMENT D-II

HIGH CLEARANCE / HI-LIFT TRACK SYSTEM

FOR ALL HI-LIFT CABLE DRUMS EXCEPT 400-54 SEE PAGES 1 AND 2 FOR 400-54 CABLE DRUMS.

The following instructions are to be read with the regular instruction manual. Read both instructions complete before starting the installation.

NOTE: The term Hi-Lift refers to the measurement from the top of the door to the underside of the horizontal tracks. A normal Martin Sectional Door with 2" (51) wide track will have about 4" (102) of Hi-Lift. This can be increased to as much as 11" (279) Hi-Lift by adding an optional vertical track extension kit shown on page 13. Extension kits can be added to Martin Doors only. Martin regular track, cable drums, lift cables and springs are all designed to maintain satisfactory door operation up to 11" (279) Hi-Lift. See Page 13



SJPPLESEZT C

Follow the regular instruction manual.

STEP 2

STEP 1

See the High Clearance / Hi-Lift chart in this supplement.

STEPS 3 to 8

Follow the regular instruction manual. This door may or may not be furnished with finger shields.

STEP 9

If this door has an outside lock handle the roller bracket below the top roller bracket must be at least a #6, if not the outside T-Lock Handle may hit the header as the door is being raised. See "Outside T-Lock Handle Track Modifications" on page 6 in this supplement.

STEPS 10 to 15

Follow the regular instruction manual.

STEP 16

Refer to "NOTE" in the beginning of this supplement.



STEP 17

Follow the regular instruction manual and the additional instructions as follows:

NOTE: If the Hi-Lift track system was not factory ordered read "MAKING HI-LIFT TRACKS FROM REGULAR TRACK ASSEMBLIES" at the end of STEP 17.

- A. Use the Hi-Lift tracks with Hi-Lift track angles attached to measure the distance from the top of the vertical tracks to the bottom hole in each side bearing bracket. The measurement is the length of the Hi-Lift tracks plus 12 1/2" (318). The holes must be level with each other. (See Figures D1, D2, D3, D6)
- B. Place the side bearing brackets on the hole mark on each jamb to mark all 6 holes. Make sure the side bearing brackets are straight above (plumb) and in line with the reverse angle shields. The measurement between the outside edge of the side bearing brackets must be the same as the measurement between the outside edge of the reverse angle shields. Drill all 6 holes in each jamb and fasten the side bearing brackets solid (See Figures D1, D2)
- C. Use rope or some other method to temporarily hold the back of the horizontal tracks in place.
- D. Fasten the curves of the horizontal tracks to the top of the Hi-Lift tracks and the Hi-Lift track angles with 1/4 x 1/2 short neck carriage bolts and 1/4" lock nuts. Fasten the horizontal track angles to the left and right side bearing brackets with 3/8 x 1" short neck carriage bolts and 3/8" lock nuts. (See Figure D3)
- E. Fasten the bottom of the Hi-Lift tracks to the flag splice plate with 1/4 x 1/2" short neck carriage bolts and 1/4" lock nuts. Cut support plates (shipping clips) and fasten to the top of the flags with 1/4 x 1/2" short neck carriage bolts and 1/4" lock nuts. (See Figure D2, D4, D5)
- F. Fasten the top of the Hi-Lift tracks with the Hi-Lift track angles attached to the horizontal track angles and side bearing brackets with 3/8 x 1" short neck carriage bolts and 3/8" lock nuts. The Hi-Lift track angles should be 3" to 7" (76 to 178) back from the jamb. Its OK to increase the gradual incline of the Hi-Lift tracks to make sure the top of the door will miss the springs and Hi-Lift cable drums as the door opens. (See Figure D3, D6, D9)
- G. Line up all tracks at each splice for a smooth operation and to avoid future damage to the rollers. Drill 1/4" holes in Hi-Lift tracks at support plate location and fasten with 1/4"x1/2" short neck carriage bolts and 1/4" lock nuts. (See Figures D4, D5, D6)
- H. Level the horizontal tracks and set them parallel and square back from the door. Fasten the horizontal tracks at the rear, using punched angle track hangers and punched angle braces with 3/8"x1" short neck carriage bolts and 3/8" lock nuts. Fasten the punched angle to the ceiling with the 5/16"x2" lag screws furnished or other correct fasteners. (See Figures 13 and 20 in the regular instruction manual)



STEP 17 CONTINUED

REINFORCEMENT

PLATE

I. Fasten the optional spring bumpers, if furnished (Normally purchased for manually operated doors), to the spring bumper brackets with 1/4"x3/4" hex head bolts and 1/4" lock nuts. The spring bumper assemblies should be positioned at the end of the horizontal tracks to stop the open door. A rule to calculate the distance from the jamb and header line to the point where the door makes contact with the spring bumper on the horizontal tracks is as follows: The door height plus 4" (102), minus the length of the Hi-Lift track. Drill two 1/4" (7) holes in each horizontal track and fasten the spring bumper assemblies to the horizontal tracks with 1/4"x3/4" hex head bolts and 1/4" lock nuts. The top door section should make contact with both spring bumpers simultaneously. Two pull down ropes can also be used to stop lightweight doors in the open position. NOTE: Doors operated by chain hoist or motors may not require optional spring

bumpers or pull down ropes.

MAKING HI-LIFT TRACKS FROM REGULAR TRACK ASSEMBLIES

The Hi-Lift tracks can be cut and made from the back ends of the regular horizontal tracks furnished with a door.

If the measurement to the cut in the horizontal tracks include at least 5" (127) of horizontal track angle, cut the horizontal track angles 13" (330) beyond the horizontal track cut. Drill a 3/8" hole 1/2" (13) from the end of the angle. The horizontal track angles now become Hi-Lift track angles. Drill any necessary holes needed to install, fasten or strengthen the horizontal track angles and the Hi-Lift track angles. (See Figure D3)

If the measurement to the cut in the horizontal tracks include no horizontal track angles, two 18" (45) angles must be purchased or the installation cannot be completed. Drill any necessary holes needed to install, fasten or strengthen the high lift tracks and angles. (See Figures D3, D6)

CUT VERTICAL TRACK 1 1/2" (38) DEEP AND

shown.

BEND

#3 OR #4 ROLLER BRACKET



6



S U Ρ Р Ξ STEP 26 M Ξ Ν **STEP 27** D

NOTE:

FIGURE D10								FIGURE D11									
HI-LIFT PUN (SEE	MINI SKY	HANG™	ENT A FOR ON THE ND BRACING	PUNCHED A MINI SKY HA (SEE STEP 2	NGLE NG ING 7 "NOTE")				D D	ED HI-LIFT ABLE DRUM					SIDE SPF ANCHOR	RING BRACKET FT SIDE ARING ACKET	
HI-LIFT CABLE DRUM	SIDE BEARING BRACKET Also requires center bearing	MAXIMUM REQUIRED CLEARANCE guires WEIGHT (INCHES OF (INCHES OF DRUMS MAXIMUS MAXIMUM ADDING HI-LIFT ADDING HI-LIFT TRACK DING HI-LIFT TRACK TRACK HI-LIFT TRACK TRACK HI-LIFT TRACK HI-LIFT TRACK HI-LIFT TRACK HI-LIFT TRACK HI-LIFT TRACK HI-LIFT HI-LIFT TRACK HI-LIFT HI-LIFT TRACK HI-LIFT HI-LIFT			CK SY MA V L	A SYSTEMS INFOR MAXIMUM DOOR WEIGHT FOR LIFT CABLES 1/8" 5/32" 3/16" CABL DRUM				AXIMUM DOOR WEIGHT FOR TORSION TUBE/SHAFT CALCULATION: DIVIDE THE "MIP" (maximum inch pounds) NUMBER BY THE "TOTAL LEVER ARM NUMBER" 16 GA. 11 (25) 1" (25) 11/4" (32) 16 GA. 11 (25) 1" (25) 1.50 ID							
400-54	4" (102) Lock-On Side Bearing Bracket	550 lbs. (249)	10' (6" TO 54") 11' (18" TO 54") 12' (30" TO 54") 13' (42" TO 54") 14' (54" ONLY)	54" (1372)	50" (1270)	14" (356)	(3) 450 lbs. (204)	(4) 550 Ibs. (249)	(5)	70" (1778) PLUS DOOR HEIGHT	тиве 600 МІР	980 MIP	SHAFT	SHAFT	2.0 PLUS .1 PER 6" (152) OF HI-LIFT =		
5250-54	4.75" (121) HVY BEARING OVER 600 lbs. (272)	1000 lbs. (454)	15' (6" TO 54") 16' (12" TO 54") 17' (24" TO 54") 18' (36" TO 54") 19' (48" TO 54")	54" (1372)	50" (1270)	15" (381)	450 lbs. (204)	800 Ibs. (363)	1000 lbs. (454)	73" (1854) PLUS DOOR HEIGHT		980 MIP	3280 MIP		2.7 PLUS .09 PER 6" (152) OF HI-LIFT =		
5750-120	5.75" (146) HVY BEARING OVER 600 lbs. (272)	1000 lbs. (454)	12' (6" TO 120") 14' (24" TO 210") 16' (48" TO 120") 18' (72" TO 120") 20' (96" TO 120")	120" (3048)	116" (2946)	16" (406)	450 lbs. (204)	800 Ibs. (363)	1000 lbs. (454)	140" (3556) PLUS DOOR HEIGHT		980 MIP	3280 MIP		2.9 PLUS .08 PER 6" (152) OF HI-LIFT =	\$) =	
6375-164	6.75" (172) HVY BEARING OVER 600 lbs. (272)	1600 lbs. (726)	19' (6" TO 164") 20' (12" TO 164") 22' (36" TO 164") 24' (60" TO 164") 26' (184" TO 164") 28' (108" TO 164") 30' (132" TO 164") 32' (156" TO 164")	164" (4166)	160" (4064)	17" (432)	450 lbs. (204)	800 Ibs. (363)	1000 lbs. (454)	188" (4775) PLUS DOOR HEIGHT		980 MIP	3280 MIP	8000 MIP	3.2 PLUS .08 PER 6" (152) OF HI-LIFT =		

SUPPLEMENT E-I VERTICAL-LIFT TRACK SYSTEM WITH SIDE MOUNT SPRINGS

TORSION SPRING ASSEMBLY (UP)

The following instructions are to be read with the regular instruction manual. Read both instructions complete before starting the door installation.

STEP 1 Follow the regular instruction manual.

STEP 2 Required clearance is twice net door height plus 12" (305).

STEP 3 to 15 Follow the regular instruction manual.

STEP 16 Does not apply to a Vertical-Lift track system.

STEP 17

Follow the regular instruction manual and the additional instructions as follows:

A. The top of the vertical tracks should have been set level with each other about 8 1/2" (216) down from the top inside edge of the level door. (See Figures E2, E6)

12" (305)

TWICE THE NET

DOOR HEIGHT

- B. Fasten 5" (127) support plates (shipping clips) to the top of the flags with 1/4x1/2" short neck carriage bolts and 1/4" lock nuts. (See Figures E2, E4, E5)
- C. Measure straight up (plumb) from the floor, twice the net door height and mark the jamb. This is the bottom hole measurement of the side bearing brackets for fastening the torsion spring assembly up. The vertical-lift track can be used to make this measurement as explained in "F" on the next page. The required total clearance is twice the net door height plus 12" (305) (See Figures E1, E2, E9)
- D. Make sure the outside edge of the side bearing brackets are lined up vertical (plumb) with the outside edge of the reverse angle shields. Measure the width of each to make sure. Drill 6 holes in each jamb and fasten each side bearing bracket solid. (See Figures E1, E2)





- E. Fasten the 18" (457) slotted angle to each side bearing bracket with 3/8"x1" short neck carriage bolts and 3/8" lock nut. (See Figures E3, E6)
- F. Drill two 3/8" holes at the top part of each vertical-lift track. One hole at twice the net door height which can also be used for measuring the side bearing bracket location and one hole at the end for the safety bolt. (See Figure E3)
- G. Fasten the vertical-lift tracks to the 18" (457) slotted angle with 3/8"x1" short neck carriage bolts and 3/8" lock nut. Measure and make sure the top of the door will clear the vertical-lift cable drums and the torsion spring assembly as the door opens. Fasten 3/8"x1" short neck carriage bolts (safety bolts) and 3/8" lock nuts at the end of the vertical-lift tracks. (See Figure E3, E6)
- H. Fasten the bottom of the right and left vertical-lift tracks to the splice plates with 1/4"x1/2" short neck carriage bolts and 1/4" lock nuts. Line up each vertical-lift track at the splice for a smooth operation to avoid future damage to the rollers. (See Figures E4, E5)
- Drill 1/4" holes and fasten the vertical-lift tracks to the support plates with 1/4"x1/2" short neck carriage bolts and 1/4" lock nuts. (See Figures E4, E5)

STEP 18

Follow the regular instruction manual except the side bearing brackets were installed in step 17. Observe again that in step 26 the top of the door must clear the springs and cable drums when door is raised to full open position.

STEPS 19 to 25

Follow the regular instruction manual except a steel bearing must be fitted into each spring anchor cone. (See Figures E7, E8, E9)

STEP 26

Follow the regular instruction manual except lift cable tension adjusters are not necessary for vertical-lift installations.

STEP 27

Follow the regular instruction manual. Brace with punched angle if extra stability is needed. (See Figure E9)

STEP 28

Does not apply to a vertical-lift track system.

STEP 29

Follow the regular instruction manual. Fasten warning labels over side bearing bracket fasteners. (See Figure E10)



LEMENT E

S U P P



SUPPLEMENT E-II

VERTICAL-LIFT TRACK SYSTEM WITH SIDE MOUNT SPRINGS

TORSION SPRING ASSEMBLY (DOWN)

The following instructions are to be read with the regular instruction manual. Read both instructions complete before starting the door installation.

STEP 1 Follow the regular instruction manual.

STEP 2

Required clearance is twice net door height plus 12" (305).

STEP 3 to 15 Follow the regular instruction manual.

STEP 16

Р

Ε

Does not apply to a Vertical-Lift track system.

STEP 17

Follow the regular instruction manual and the additional instructions as follows:

A. The top of the vertical tracks should have been set level with each other about 8 1/2" (216) down from the top inside edge of the level door. (See Figures E12, E16)

FIGURE E11

12"

TWICE THE NET

DOOR HEIGHT

(305)

- B. Fasten 5" (127) support plates (shipping clips) to the top of the flags with 1/4x1/2" short neck carriage bolts and 1/4" lock nuts. (See Figures E12, E4, E5)
- C. Measure straight up (plumb) from the floor, twice the net door height and mark the jamb. This is the top hole measurement of the side bearing brackets for fastening the torsion spring assembly down. The vertical-lift track can be used to make this measurement as explained in "F" on the next page. (See Figures E11, E12) Normal clearance above this measurement should be at least 12" (305) for the vertical-lift track. However, if clearance is limited, up to 10" (254) can be cut off the top of the vertical-lift tracks. The top of the door will bump against the ceiling each time the door is open. (See Figure E19)
- D. Make sure the outside edge of the side bearing brackets are lined up vertical (plumb) with the outside edge of the reverse angle shields. Measure the width of each to make sure. Drill 6 holes in each jamb and fasten each side bearing bracket solid. (See Figures E11, E12)



FIGURE E13



- E. Fasten the 18" (457) slotted angle to each side bearing bracket with 3/8"x1" short neck carriage bolts and 3/8" lock nuts. (See Figures E13, E16)
- F. Drill two 3/8" holes at the top part of each vertical-lift track. One hole at twice the net door height which can also be used for measuring the side bearing bracket location and one hole at the end for the safety bolt. (See Figure E13)
- G. Fasten the vertical-lift tracks to the 18" (457) slotted angle with 3/8"x1" short neck carriage bolts and 3/8" lock nut. Measure and make sure the top of the door will clear the vertical-lift cable drums and the torsion spring assembly as the door opens. Fasten 3/8"x1" short neck carriage bolts (safety bolts) and 3/8" lock nuts at the end of the vertical-lift tracks. (See Figure E13, E16)
- H. Fasten the bottom of the right and left vertical-lift tracks to the splice plates with 1/4"x1/2" short neck carriage bolts and 1/4" lock nuts. Line up each vertical-lift track at the splice for a smooth operation to avoid future damage to the rollers. (See Figures E4, E5)
- Drill 1/4" holes and fasten the vertical-lift tracks to the support plates with 1/4"x1/2" short neck carriage bolts and 1/4" lock nuts. (See Figures E4, E5)

STEP 18

Follow the regular instruction manual except the side bearing brackets were installed in step 17. Observe again that in step 26 the top of the door must clear the springs and cable drums when door is raised to full open position.

STEPS 19 to 25

Follow the regular instruction manual except a steel bearing must be fitted into each spring anchor cone. (See Figures E17, E18, E19)

STEP 26

Follow the regular instruction manual except lift cable tension adjusters are not necessary for vertical-lift installations.

STEP 27

Follow the regular instruction manual. Brace with punched angle if extra stability is needed. (See Figure E19)

STEP 28

Does not apply to a vertical-lift track system.

STEP 29

Follow the regular instruction manual. Fasten warning labels over side bearing bracket fasteners. (See Figure E20)



S U P P LEMEN Т Ε





- Loosely fasten the coupler together with the bolts and nuts provided.
- C. Fasten the center spring brackets securely at the correct height to keep the torsion shaft level and straight.
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SOPPLESET F



Refer to NOTE and the unassembled coupler drawing on page 1 in this "F" supplement.

STEPS 20 to 26

Follow the regular instruction manual and the additional instructions as follows:

A. Put the torsion spring assembly together as illustrated. Place a key in the key way of each torsion shaft and coupler and tighten the coupler set screws. Make sure the torsion shaft or the key does not extend beyond the coupler so that the two parts of the coupler can be fastened tightly together during "F".



SUPPLEMENT F-III

3-1 REDUCED DRIVE CHAIN HOIST FOR REGULAR, HI-LIFT, AND VERTICAL LIFT DOORS

- 1. Fit the roller chain around the 2" sprocket in the chain hoist assembly and connect the ends of the roller chain with the master link.
- 2. Slide the 6" sprocket on the torsion shaft.
- 3. Lift up the chain hoist assembly and fit the roller chain around the 6" sprocket.

NOTE: The chain hoist assembly can be installed on the right side or the left side of the door opening by rotating the guide plate. Re-fasten the guide plate bolt and nut.

- 4. Fasten the chain hoist assembly to the jamb. Make sure the chain hoist assembly is plumb. The 2" sprocket must be in line with the 6" sprocket.
- 5. Slip the key into the keyway of the 6" sprocket and torsion shaft and tighten the set screws.
- 6. Fasten the chain latch bracket to the jamb about 4 to 5 feet up from the floor and 2 or 3 inches to the right or left, away from the hand chain.

NOTE: The loop of the hand chain that is used to close the door will latch to the chain latch bracket when the door is in the closed position. The other loop of the hand chain that is used to open the door will latch to the chain latch bracket when the door is in the open position.

CAUTION: When using a reduced drive chain hoist to close a light weight sectional door, be sure to stop pulling on the hand chain when the bottom of the door touches the floor. An extra 4" or 5" of pull may cause the lift cables to loosen and fall off the cable drums.

7. Open and close the door with smooth hand over hand pulls on the hand chain.







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