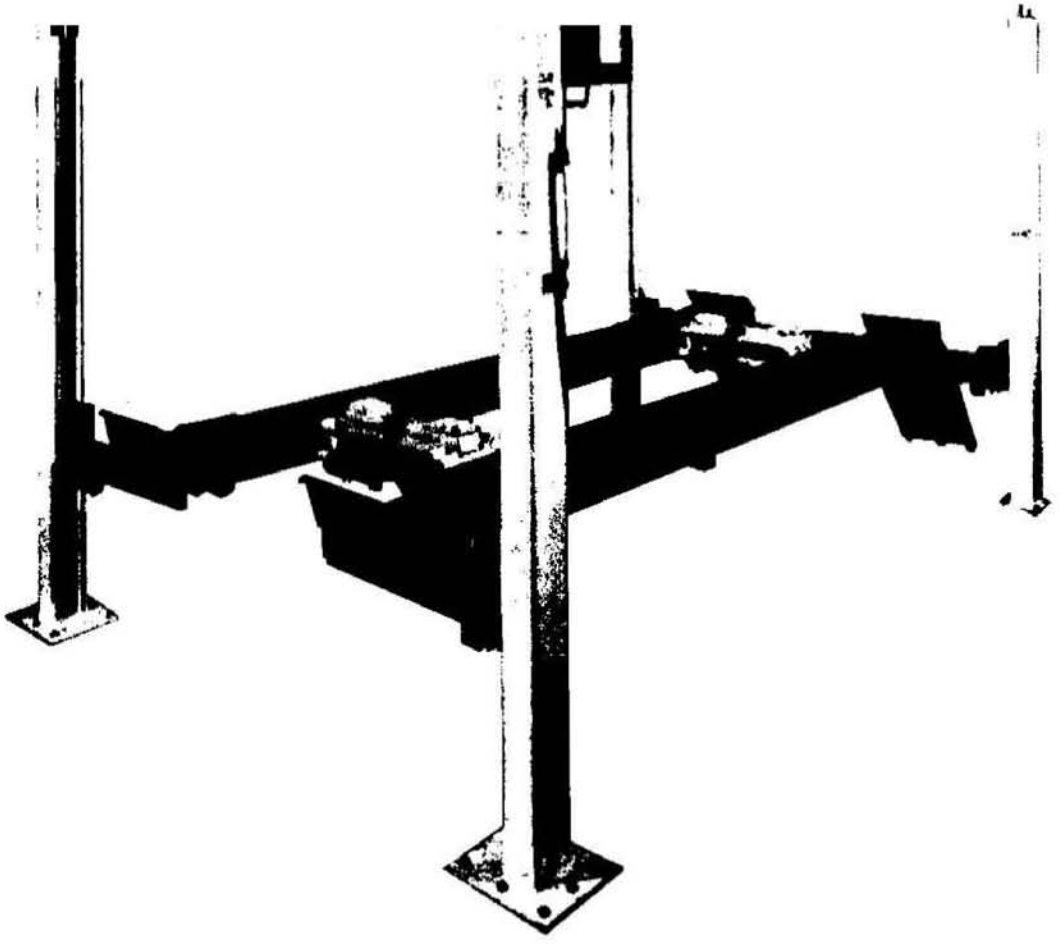
FMC Automotive Service Equipment Division

MODEL 4580 FOUR POST OPEN END ALIGMENT RACK



INSTALLATION AND OPERATION MANUAL

INSTALLATION, OPERATING & MAINTENANCE INSTRUCTIONS

ALL OPEN BEAM 12,000LB (4-POST LIFTS)

We always recommend that your lift be installed by a qualified installer or factory service person. Call us for information on one closest to you. The lift installer must read the instruction/installation manual before installation.

SITE PREPARATION

1. The floor must be of sound construction and level to ensure safe operation of the lift. There should be no obvious flaws, cracks, etc..
2. Care should be taken to ensure that the Lag Bolts, which should penetrate to a minimum depth of 3¼" (once set) do not foul any underfloor obstacles. i.e. underfloor heating or steel reinforcing rods. The lift must be sited to avoid such obstructions. If the floor is not to this standard, then it should be excavated under the base to a minimum depth of 4" and filled with 3000 PSI Stone Aggregate Concrete (or stronger). Drill a test hole first if there is a question of thickness.
3. A 220 volt 1 phase 60 Hz or other as ordered (see motor plate for details) electrical supply with a fused isolator switch must be available (switch in accordance with local electricity regulations and supplied by customer). A competent electrician should be ready to connect and test electrical components when lift is installed.

IMPORTANT!!
Read through instructions before proceeding with installation!!

Refer to illustrated parts breakdown to identify item numbers mentioned:

1. Refer to site plan for dimensions of the model of lift you are installing — layout centre line and location of front column assemblies.
2. Locate #85 left front post and #15 crossmember. Lay post down horizontally from opening at top of post. (It may be necessary to pry crossmember past safety rack). Once the crossmember is partially engaged into post, the safety latch and dead drop latch will need to be pulled back to allow sliding the crossmember all the way down the post.
3. Repeat Step 3 for the #8 right front post and #9 crossmember.
4. Stand up #85 left front post and #9 crossmember assembly and move into position (see Step 2).
5. Using the post base plate as a template, with a ¾" concrete bit, drill holes and insert ¾" x 5½" (long) anchors as you drill. ***(Do not drive anchors all the way in).*** When all seven (7) anchors are inserted, check post level, placing level on wear strip and on either side of post level, placing level on wear strip and on either side of post opening (assure yourself that level is not resting on burrs, etc.) Shim** post as required to level it, drive and secure anchors and recheck level (adjust, if required).

   ** ***Use shims to level only, base must maintain contact with floor. Also assure that there are shims as close as possible to all anchors where a gap exists after levelling. Shim in a fashion to create full floor contact by base over at least 80% of its area!***

6. Stand up #8 right front post and #9 crossmember assembly and move into position (see Step 2). ***(Do not drill).***
7. Raise both crossmembers to approximately 28" from floor, check that safety latches are fully engaged (adjust if required).
8. Centre both crossmembers in the front columns.
9. Using a straight edge or string make sure both crossmembers are aligned to each other.
10. Confirm the 118" dimension between wear strips at the very bottom of both front posts.
11. Repeat step 5 for right post.
12. Place the rear crossmember on stands at the same height from the floor as the front crossmembers and parallel to them for a #78: 173" between front and rear crossmembers; for a #98: 204" between front and rear crossmembers.
13. Install the cables in the rear crossmembers. To do this, all pulleys must be removed. Take note of the position of the pins, spacers, pulleys and nylon washers for reassembly. Refer to the cable routing plan but in general, the cables are routed as follows:
    - — longest to right front (P2)
    - — second longest to left front (P1)
    - — third longest to right rear (P4)
    - — shortest to left rear (P3)
14. Remove the four #87 — ½" UNC x 1½" long hex bolts from the crossmembers.
15. Install the runways on the crossmember.

Note: ***At this point, before going under the lift, ensure that the front safeties are securely locked and that your stands are properly located under the rear crossmember.***

16. Re-install the four #87 hex bolts c/w washer.

17. Finish routing of cables to the left and right front posts. Remove and reinstall pulleys under the runways and in the right and left front crossmembers to allow the cable to be put through.

18. Install the loop end of the cables on the #48 trunnion found on the rod end of the hydraulic cylinder assembly. Cable end can then be pulled up through each column top plate and be fastened with 1 cable spacer, 1 flat washer, and 2 cable nuts. The rear columns should be placed as close to plastic wear blocks as possible. It may be necessary to get a man on each cable end to pull in order to extend the cylinder.

19. Next connect the power unit using #5 4-5/16" UNC x 3/4" long hex bolts located in the mounting bracket on the left front power post. Connect the power pack to the left front runway via the #108 3/8" JIC steel line, #58 3/8" tube to 1/4" FNPT union, #70 6' rubber hydraulic line and #74 adaptor fitting 1/4" MNPT to 1/4" MJIC. Use teflon tape or pipe sealant on all pipe thread connections. Refer to the parts list illustration for part numbers, descriptions and general assembly arrangement.

20. 220V 10 power supply can now be connected and the oil reservoir filled to the dip stick with IOW hydraulic oil or Dextron II transmission fluid. The elbow and breather cap should then be installed. Capacity: 3 gallons. At this point, the lift can be raised slightly.

21. The stands removed and the posts will hold the weight. The rear posts should be checked and shimmed level. A diagonal corner to corner measurement should be taken to ensure the runway/crossmember assembly is diagonally true. Minor adjustments can be made by gently bumping the rear columns in the proper direction. If shimming is required to level, the post baseplate must be well supported by shims.

22. Then, if everything appears ok, the two rear posts can be rechecked for level and the floor anchors installed. You must ensure the wear blocks are contacting the posts. Check each post before anchoring.

    Note: You can't remove the anchors, so make sure it's right!

23. When all the posts are anchored, raise the lift to full height. This will facilitate installation of air supply and air release lines for safety latches. Check to see that the plastic wear block-to-column dimension is the same as the travel of the lift.

24. Locate the 1/4" polytube (approx. 60' coil) in the hardware box. Run on the outside tube of the left side runway a line from the front left air release cylinder to the rear crossmember. There are 6 carrier tubes through which it should pass attached to the inside surface of the outer tube. Connect it to the #67 1/4" female tube tee already plumbed to the rear crossmember. Connect the right side similarly.

25. Locate the #79 1/4" FNPT tee weldment in the hardware box and attach it to the power post with the screws provided. The #55 screws are installed on the post.

26. Locate the #82 air release valve and install the two #80 1/4" polytube to 1/8" MNPT fittings. Attach it to the power post with two #76 #6-32 bolts, nuts and washers provided. Note the "in" and "out" ports in the air valve — "in" should be connected to the filter lubricator.

27. Locate the #105 1/4" MNFT to 1/4" polytube elbow and install it in the #79 1/4" FNPT tee weldment in Step 18 to the right side. Join the tee to the air valve using a length of 1/4" polytube from the 1/4" polytube coil.

28. Connect the bottom of the air valve to the line which you previously connected from front to rear. This is accomplished with approximately 10' of 1/4" polytube and a final #67 1/4" polytube "T" provided in the hardware box. You must cut the line and insert the "T" to do this.

    Note: This Step 17 is required only if air jacks are being used. Otherwise one side of the #79 1/4" FNPT tee weldment above the air valve can be plugged.

    Find in the hardware box a #107 1/4" MNPT to MJIC elbow and install it in the #79 1/4" FNPT tee weldment.

29. To this join the #83 10'6" air line. Find under the inner rail of the left side runway a ¼" short tee. Join the male-threaded end of the #83 10'6" rubber air line to the #20 "T" at the front end. At this point you have two open ports to connect to your jacks. Teflon tape or pipe sealant should again be used on all pipe thread connections.

30. With both air safety, air jack feed line and hydraulic line connected, it is time to install the #78 flexible wrap found in the hardware box.

31. Next an air supply should be connected to the top of the #79 ¼" FNPT tee weldment on the power post.

    We supply a water separator and oiler and it must be filled with oil and water drained periodically.

32. Check the air releases by depressing the air valve. If all safeties are released, lower the lift to the floor. This is a good time to install the #13 front wheel stops and #30 drive on ramps.

33. Adjust the cables to level the structure. Once level, lock each setting by jamming each two nuts against each other. This cable adjustment should be done with a vehicle on the lift.

34. Raise the lift until the safety on the power post clicks over the first stop. Using this post as your base, adjust the other three ladders to the same position. The result, if accurate, will be that when the lift is raised, you will not be able to detect any particular post clicking but rather 4 clicks in unison from the safeties as they ride over the stops on the safety ladders. **NOTE: Make sure that all ladders are tightened at the top (2 x 5/8" nuts) at the middle (3/8" bolt) at the bottom (3/8" bolt).**

35. Do a final check of all fasteners and check for hydraulic or air leaks.

36. Remove 3 #25 bolts and #26 nuts securing the #27 rear slip top plates. Install 96 #22 balls per #23 bearing race and reinstall the bolts and nuts snug then back off slightly to allow the plate to float. Install #24 locking pins (2) through each plate through 3/8" holes at outer edge of the rear slip pocket.

37. Grease the cables and safety ladder stops with any good quality grease, or cable/chain lubricant.

38. Fill the air lubricator on the front post.

39. Install ALI/WL200 series safety pictorial labels on left front post adjacent to the power unit so they are in constant view of the operator when operating the lift.

NOTE: If #600 Jacks are to be installed, they should be located on jack rails prior to bolting the runways to the crossmembers. If put on later, the right side runway can be unfastened and moved towards the right side approximately 3" to allow the jacks to fit then moved back and re-fastened.

OPERATION INSTRUCTIONS

TO RAISE THE LIFT:

1. Make sure there are no tools or debris on the lift.
2. Align the vehicle with the centre line of the lift. Drive on slowly ensuring that the vehicle is positioned as close to the centre as possible. Make sure that the front wheel stops are in the "up" position to prevent driving off the end of the lift. Have someone guide you on if you encounter any difficulty.
3. Place the 2 rubber wheel chocks on either side of one wheel. Vehicle should be in park and/or emergency brake applied.
4. Activate power unit on left front post to raise vehicle to desired height. It will automatically override at full height. Do NOT depress air safety release button while raising. This safety device should be allowed to function while raising the vehicle.
5. Lower the lift to the nearest mechanical safety lock position when at desired height. **"Do not allow lift to rest on hydraulics while performing repairs on vehicles".**

"RIDING ON THE LIFT IS EXPRESSLY FORBIDDEN"

TO LOWER THE LIFT:

1. Make sure there are no tools or other obstruction under the lift or vehicle.
2. Raise lift enough to unload the air-release safety locks.
3. Depress the air release safety valve.
4. Depress lowering valve on power unit while holding air release safety valve.
5. Speed of lowering can be slowed by "FEATHERING" lowering valve.
6. Operators should position themselves so that they can see all four corners of the lift are lowering.
7. If not, bring back to level and check to see that all air safeties are releasing. Recheck that nothing has been left under the lift or vehicle.

"Never bypass any safety system. Two hands are required to lower the lift as a safety measure to guard against accidental lowering".

MAINTENANCE

As with the vehicles which the lift is used to perform repairs on, the lift requires periodic inspection and maintenance. It must be performed to ensure safe, continuous operation of the lift. The Ministry of Labour in most jurisdictions mandate yearly inspections as an absolute minimum. We recommend that you follow our schedule as outlined on the lift maintenance plate as a minimum.

DAILY:

1. Check the operation of the air-safety release system (that all 4 release when the air valve is depressed).
2. Observe that the platforms are level (if not check that the cables are all properly positioned on their respective pulley and that there is no fraying of the cables).
3. On alignment lifts only: Blow out rear slip plates with clean, dry compressed air. The roller balls will fail prematurely if forced to roll on debris accumulating in this area.
4. Check for hydraulic oil leaks.

EVERY THREE MONTHS:

Inspect cables and lubricate over their full length (shops where lift is exposed to excessive moisture, caustic floor washing solutions or road salts should be lubricated more frequently). Industrial cable and chain lubricants are available which form a moisture barrier better than oil or regular grease. If the lift is operated in the above conditions or outside, we recommend that you obtain and use one of these industrial cable and chain lubricants. Depending on the model, cable may need to be removed to check over its full length.

2. Lift should be checked for levelness and cable adjustment performed if necessary.
3. Air safety lock system should be inspected and lubricated.
4. Slack cable safety locks should be inspected, checked for freedom of movement and lubricated.
5. Entire hydraulic system (cylinder, lines, fittings, power pack) should be inspected for leaks and topped up if necessary. **"Do not use the lift if any cable or safety system is found to be defective. Have it inspected and repaired by a competent person."** It is a good idea to keep written records of service inspections so that you can follow the recommended repair schedule.

EVERY SIX MONTHS:

1. Every six months the lift should be inspected by a competent person to ensure that no excessive wear has occurred and that all safety devices are working.
2. It is particulary important that the cables be inspected over their whole length for signs of fraying or rusting. **Frayed or rusty cables must be replaced immediately and the lift should not be used until repaired.**
3. A written record of your maintenance inspection should be kept.
4. Examine the safety device cable rollers for wear and lubricate where they roll on their bolt.
5. Check that the slack cable safety is moving freely and that it locks crisply into position if a slack cable condition is simulated.
6. Runway levelness should be checked and cable adjustments made as necessary.
7. All items checked at three months should be rechecked.

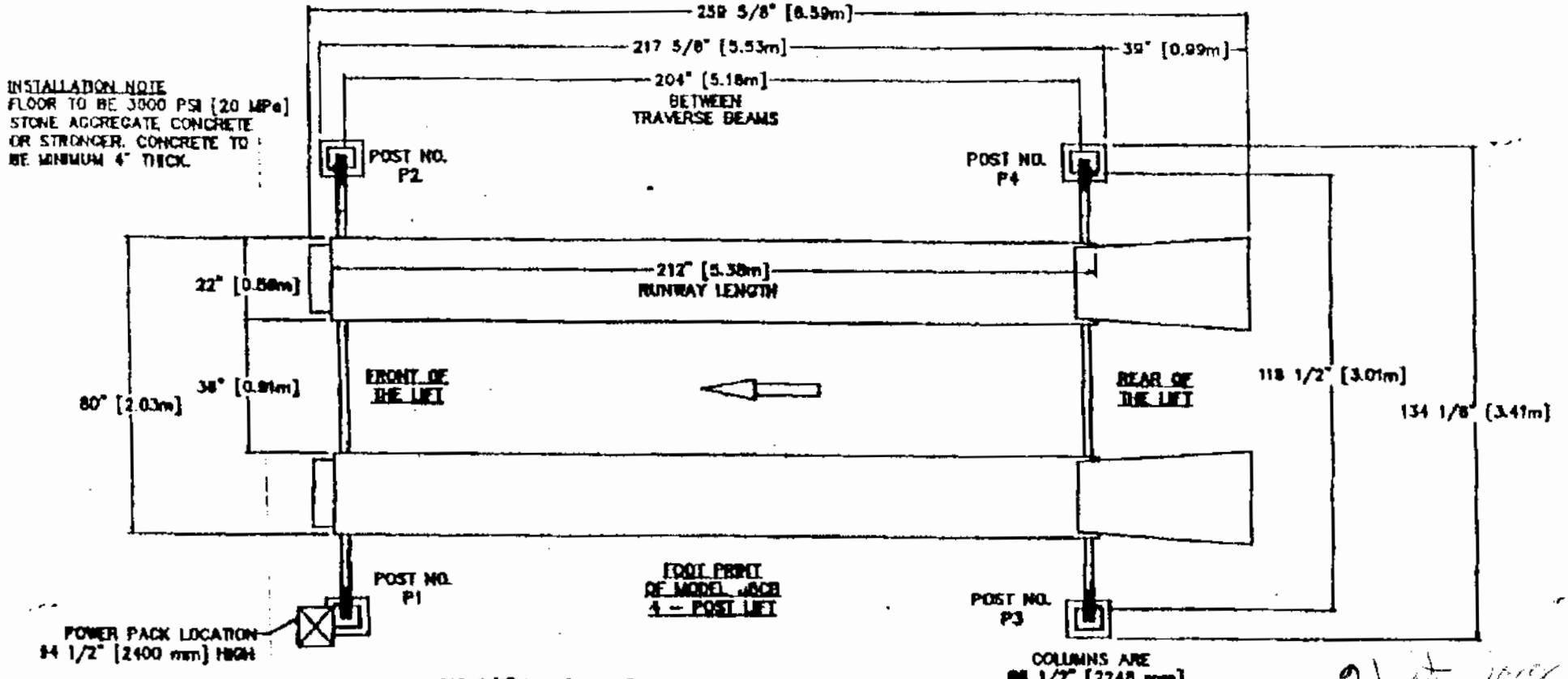
EVERY TWELVE MONTHS:

All items listed in three month and six month inspections should be checked and hydraulic fluid in power pack reservoir should be changed. Either Dexton II or 10W Hydraulic oil can be used but not mixed.

You or your service person can receive technical support and information by calling our office at:

FMC Automotive Service Equipment Division
309 Exchange Ave.
Conway, Arkansas 72032
Tel.: 1-800-FMC-TEAM or (501) 450-1500
Fax: (501) 450-1585

Form #5243 July 1995



A	FIRST ISSUE			EC
REV.	REVISION	REV. PER No.	DATE	BY

DO NOT SCALE
IF IN DOUBT, ASK

HYDRA-LIFT
"GIVING THE WORLD A LIFT"

13 EAST BEAVERCREEK RD.
RICHMOND HILL, ONTARIO
L4B 1B3
TEL: (905) 731-9464
FAX: (905) 731-9689

MODEL 98CB
FLOOR PLAN

SCALE	DATE JUN / 95	SIZE
BY EC	DWG # SP100	B