

## Technical Manual

# JBL VTX-V20



## SPECIFICATIONS

### ACOUSTIC & ELECTRICAL SPECIFICATIONS:

- System Input Power Rating: LF: 1200 W Cont., 4800 Watts Peak  
MF: 550 W Cont., 2200 Watts Peak  
HF: 315 W Cont., 1260 Watts Peak  
(AES / 2 hour)
- Frequency Response ( $\pm 3$  dB): 80 Hz – 20 kHz (ST Short Throw pre set)
- Horizontal Coverage Angle: 105 Degrees
- Vertical Coverage Angle: Array shape dependent (0 - 12.5 deg inter-enclosure angles)

### SYSTEM COMPONENTS:

- Low Frequency Driver: Two 2261H, 254 mm (10 in), 76 mm (3 in) dual voice coil, dual neodymium magnet, Differential Drive®, Direct Cooled™
- Nominal Impedance: 2 x 8 Ohms
- Bandpass Sensitivity:  
LF x2 in parallel (Active): 93 dB @ 2.00 V 1 Watt/1 Meter (2.83 Vrms at 3.3ft)  
LF x2 in Series (2W Passive): 93 dB @ 4.00 V (1 Watt/1 Meter (2.83 Vrms at 3.3ft)
- D.C.Resistance: 5.1 ohms +/- 10% each  
(2x in parallel / 2 in Series): 2.9 / 10.9 +/- 0.3 Ohms
- Mid Frequency Driver: Four 2164H, 4 in Neodymium Mid Range
- Nominal Impedance: 4 x 8 Ohms  
(series/parallel): 8 Ohms
- Bandpass Sensitivity:  
MF x4 in series/parallel: 100 dB @ 1W / 1m (2.83 Vrms at 3.3ft)
- D.C.Resistance: 4.45 ohms +/- 10% each  
4.9 +/- 0.2  $\Omega$
- High Frequency Driver: Three D2415K transducers small

### SYSTEM COMPONENTS: (CONT'D)

- format version of the patented D2 Dual Diaphragm, Dual Voice Coil annular (ring radiator) compression drivers
- Nominal Impedance: 3 x 20 Ohms  
(in parallel): 8 Ohms
- Bandpass Sensitivity:  
HF x3 in parallel: 111 dB @ 1W / 1m (2.83 Vrms at 3.3ft)
- D.C.Resistance: 16.0 ohm +/- 0.2 ohm each  
(in parallel): 6.1 +/- 0.3 Ohms
- Mid/High with Passive Network: 108 dB @ 1W / 1m (2.83 Vrms at 3.3ft)
- Nominal Impedance: 8 Ohms
- D.C.Resistance: 5.4 +/- 0.3 Ohms

### AURAL SWEEP TEST SPECIFICATIONS:

- System.Aural Sweep Test: No DSP/Active Mode
- A. L.F. Sweep Test (+/-1,+/-2): 12V Input, 10 Hz to 1 kHz
- B. MF.Sweep Test (+/-3): 10.0V Input, 350 Hz to 2 kHz
- C. H.F.Sweep Test (+/-4): 5V Input, 500 Hz to 1 kHz
- Component Fee Air Sweep Test:
- D. L.F. Sweep Test: 7V Input, 10 Hz to 1 kHz
- E. MF.Sweep Test: 8.9V Input, 70 Hz to 6 kHz
- F. H.F.Sweep Test: 6V Input, 300 Hz to 1 kHz  
(both voice coils driven in series)

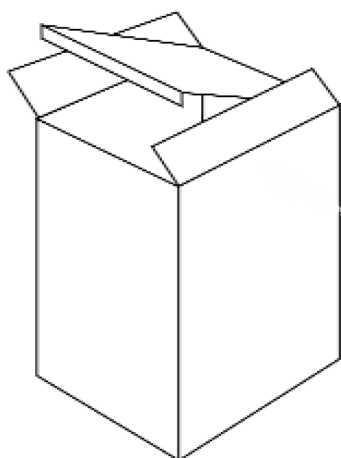
### PHYSICAL SPECIFICATIONS:

- Enclosure Dimensions: 279.9 x 911.4 x 402 mm (H x W x D)  
(11.0 x 35.9 x 15.8 in.)
- Net Weight: 40 kg (88 lbs)
- Shipping Weight: 44.5 kg (98 lbs)

### WARRANTY INFORMATION:

- Refer to Warranty Statement packed with each product.

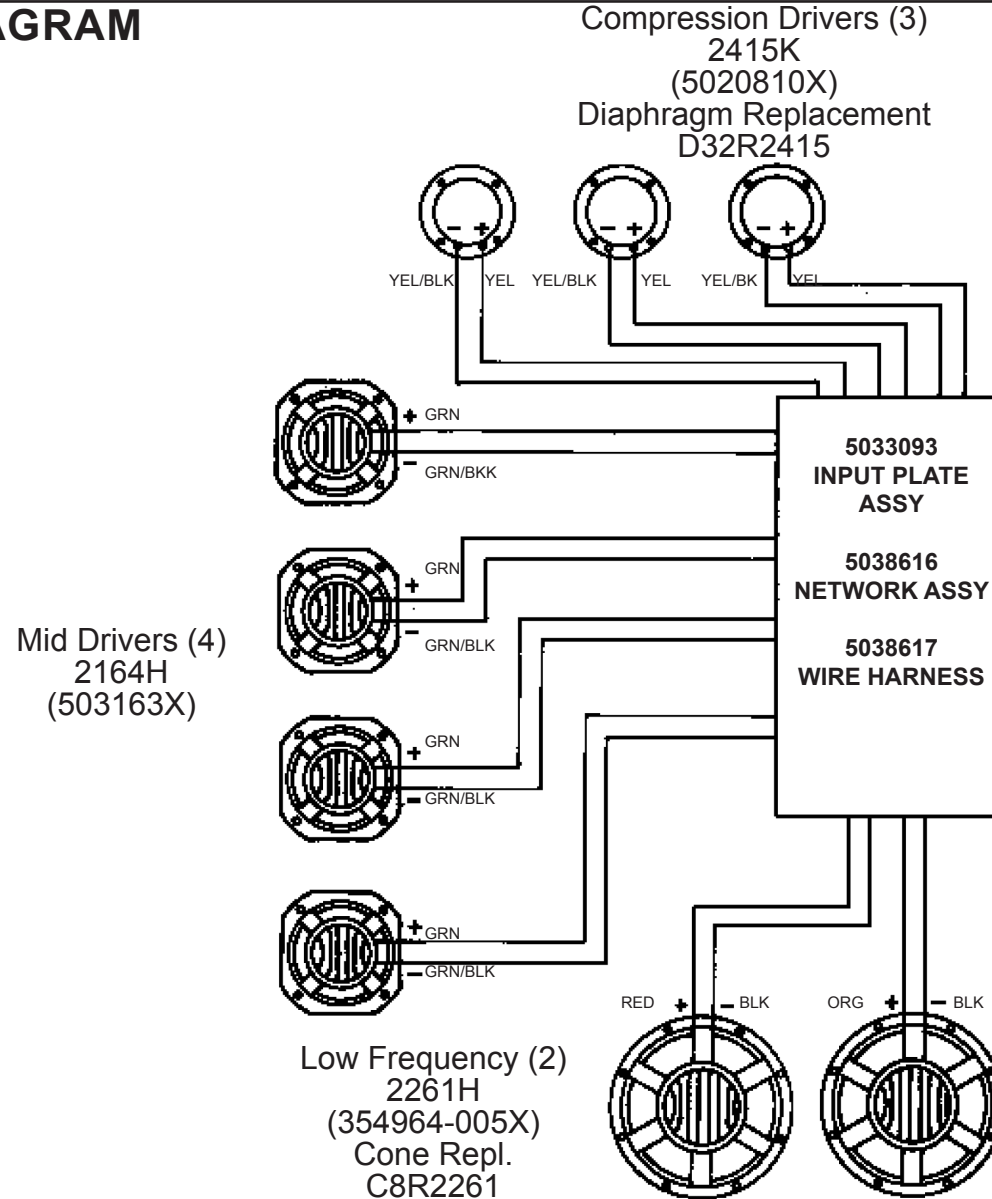
## PACKAGE



Warranty Card  
59660  
Carton  
5043477  
Filler (2)  
5043478  
PKG, Microfoam (4)  
49790P

# JBL VTX-V20

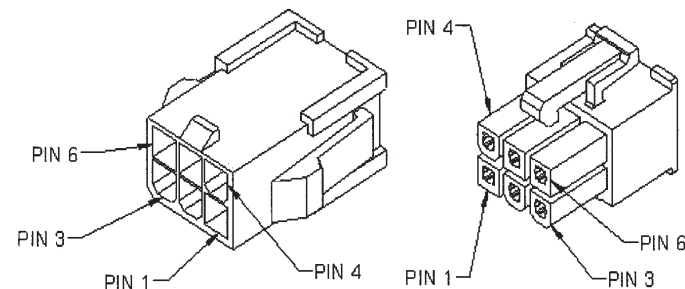
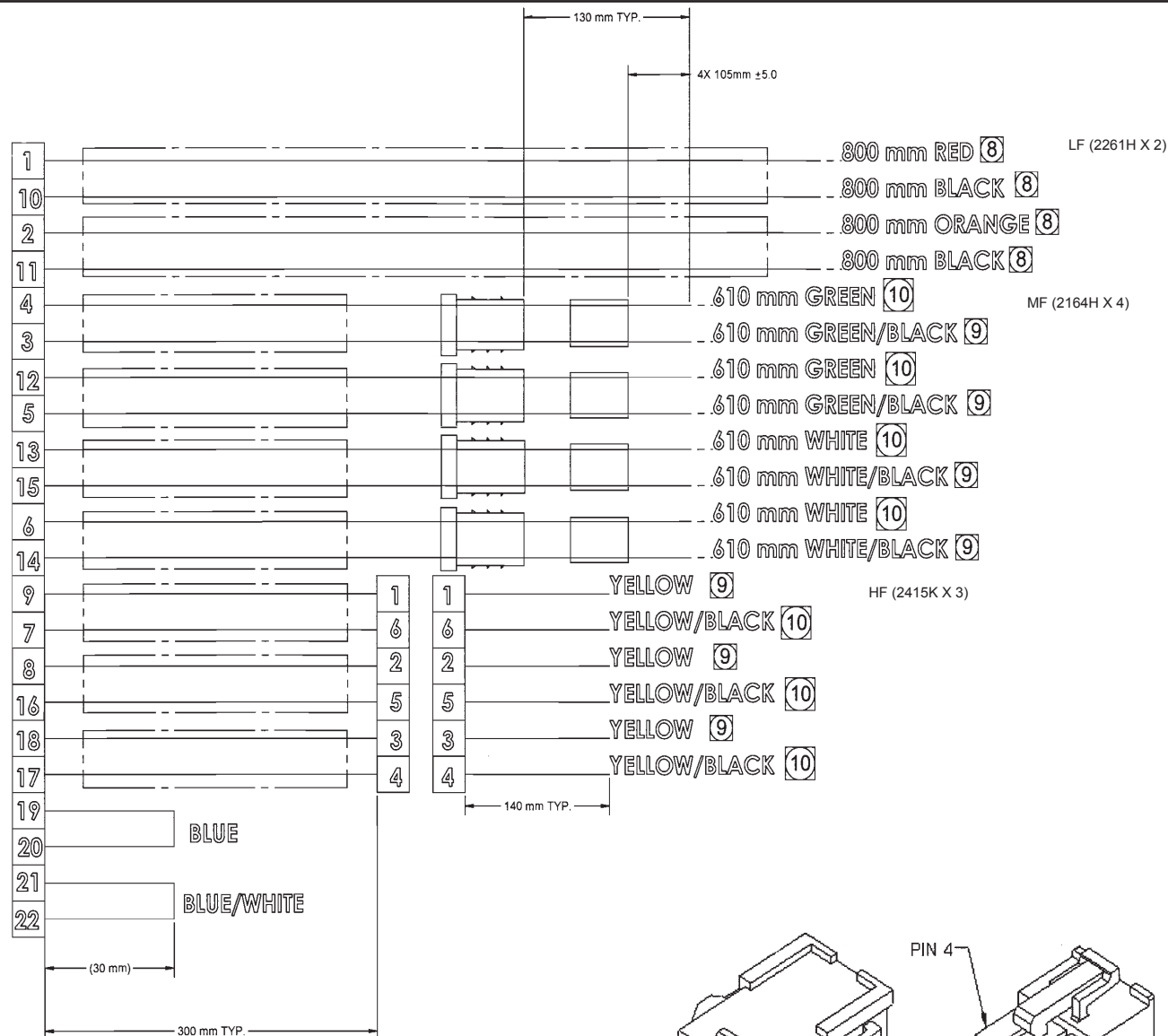
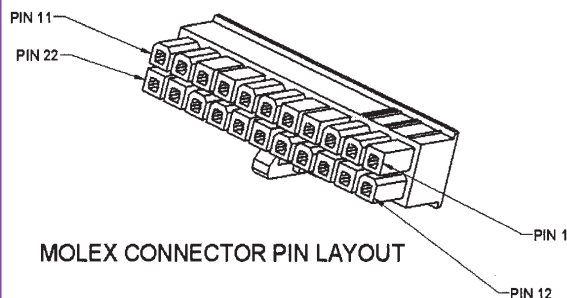
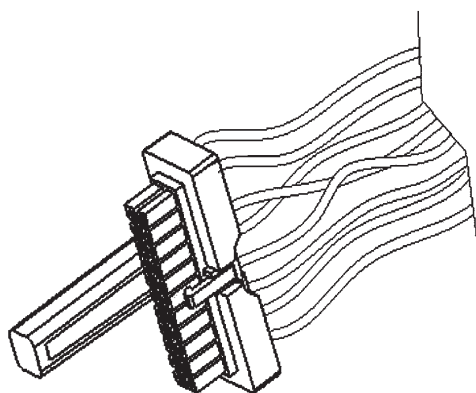
## WIRING DIAGRAM



# WIRING DIAGRAM INPUT CONNECTOR

5038617

# JBL VTX-V20



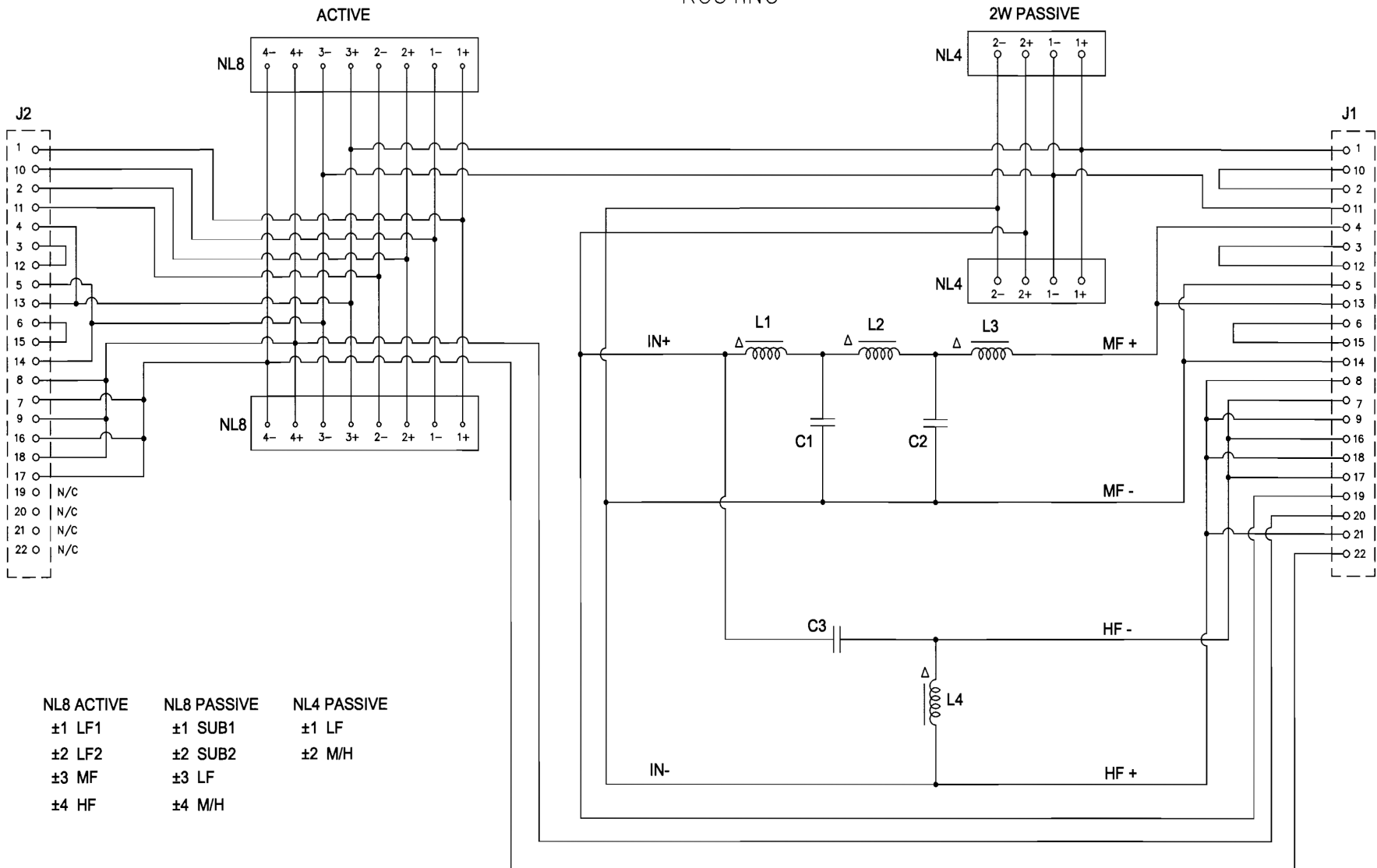
JBL VTX-V20

# JBL VTX-V20

## NETWORK SCHEMATIC

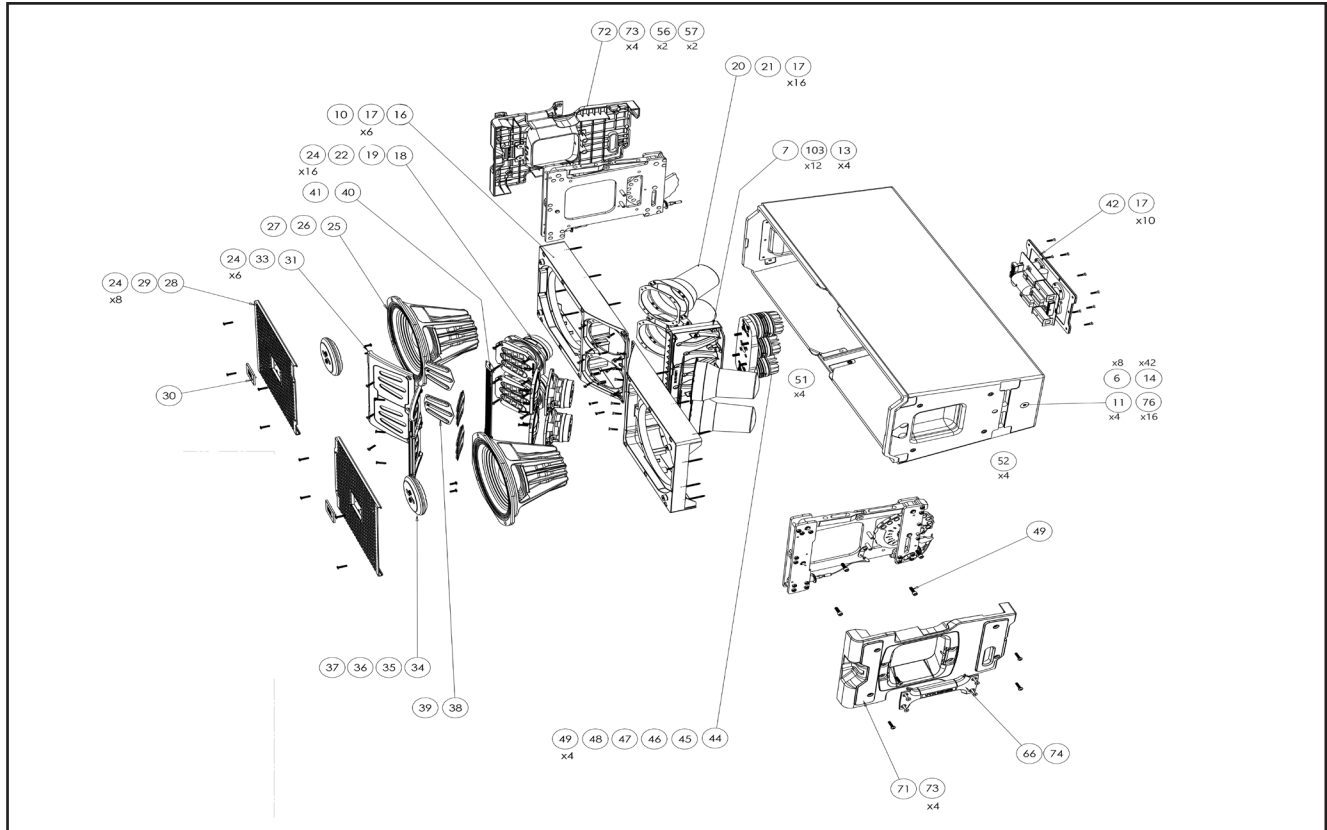
5038616

### PCB SCHEMATIC ROUTING



# JBL VTX-V20

## COMPONENT EXPLODED VIEW



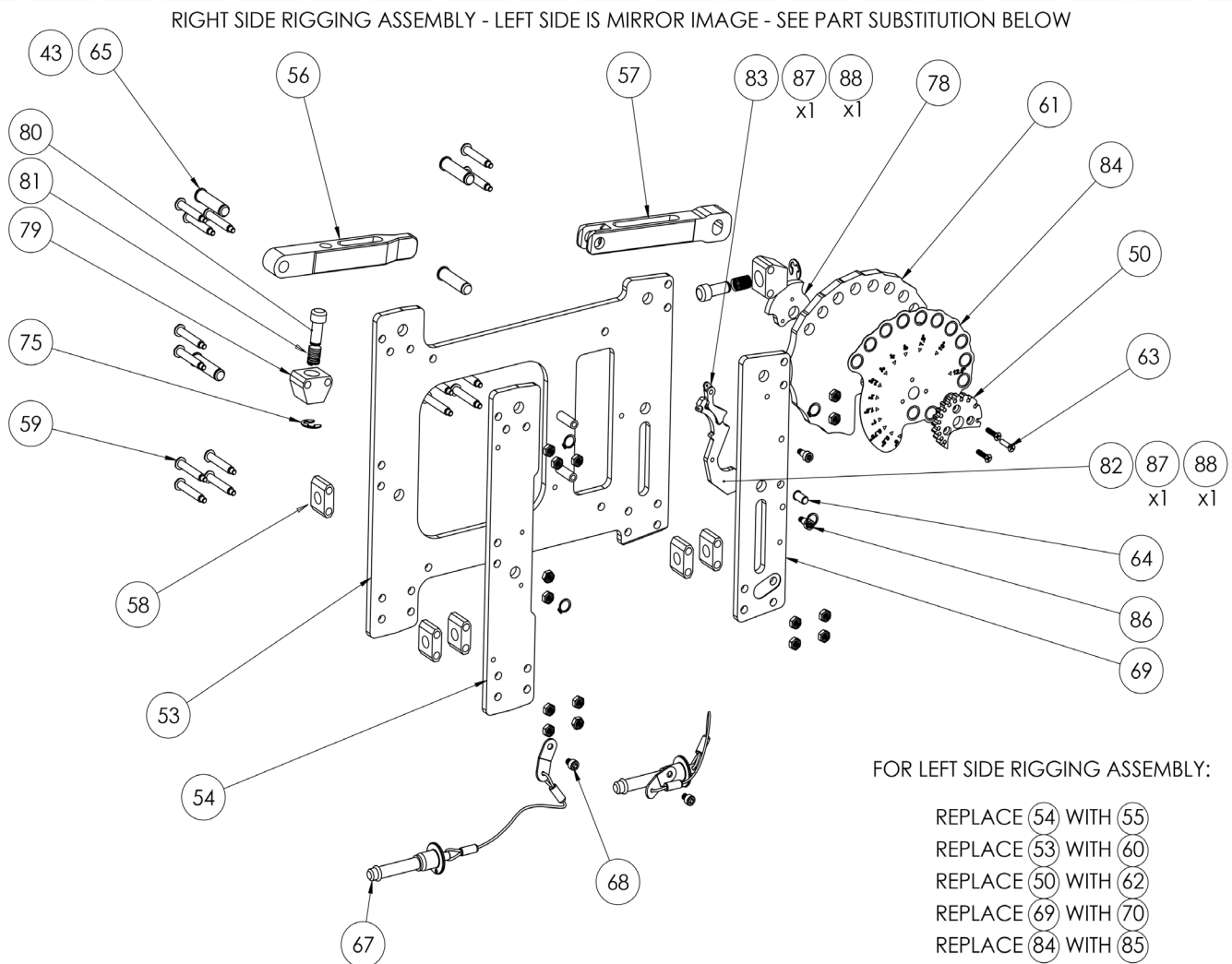
## COMPONENT PARTS LIST

| Item | Part No.     | Qty | Description                              |
|------|--------------|-----|------------------------------------------|
| 6    | 351922-001   | 8   | RIGGING BRACKET, VERTEC EXTENSION        |
| 7    | 5044789      | 2   | MANIFOLD,MACHINED GATES                  |
| 10   | 5041510      | 1   | GASKET,ENCLOSURE                         |
| 11   | 818-11710-25 | 4   | SCR,M10 X 25MM,FLT,PH,BLK ZINC,LCS       |
| 13   | 804-73156-08 | 4   | 10-32 X .50, SOCKET, HEX, SO             |
| 14   | 883-41110-08 | 42  | SCR,8 X 1/2,PAN,PH,PB,BLK ZINC,LCS       |
| 16   | 5036915      | 16  | SCR, 8X1.5, PAN HEAD, TYPE 17 AUGER POIN |
| 17   | 803-12011-12 | 32  | SCR,8-32 X 3/4,FLT,TORX,BLK ZC, LCS      |
| 18   | 5031632      | 4   | M/I, 2164                                |
| 19   | 5033090      | 4   | MIDRANGE RBI                             |
| 20   | 5036222      | 4   | MID RANGE BACK CAN                       |
| 21   | 5037018      | 4   | GASKET, BACK CAN TO BAFFLE               |
| 22   | 5037019      | 4   | GASKET, MF                               |
| 24   | 803-32011-12 | 30  | SCR,8-32 X .75,TRUSS,TORX,BLK ZINC,LCS   |
| 25   | 354964-005   | 2   | M/I, 2261H                               |
| 26   | 363644-001   | 2   | GASKET, 8" WOOFER 2261                   |
| 27   | 804-72111-16 | 8   | SCR,10-32 X 1,SOCKET, TORX,BLK           |
| 28   | 5030419      | 2   | FRONT GRILL                              |
| 29   | 5041523      | 4   | GASKET,GRILL                             |
| 30   | 446375-001   | 2   | LOGO, VXP15                              |
| 31   | 5033091      | 2   | HORN FLARE                               |
| 32   | 832-30056-00 | 30  | 8-32 KEPS NUT STAINLESS STEEL            |
| 33   | 5037017      | 8   | GASKET, FLARE                            |
| 34   | 5037921      | 2   | LF RBI, BOTTOM                           |

| Item | Part No.     | Qty | Description                              |
|------|--------------|-----|------------------------------------------|
| 35   | 5037918      | 2   | LF RBI, TOP                              |
| 36   | 5037893      | 2   | FOAM, LF RBI                             |
| 37   | 803-31010-08 | 4   | SCR,8-32 X .50, TRUSS, PHIL, BLK         |
| 38   | 5033538      | 4   | GRILL,RBI                                |
| 39   | 5036944      | 4   | GASKET, RBI                              |
| 40   | 5033537      | 1   | GRILL,HF                                 |
| 41   | 5037527      | 2   | CAP, HF GRILL                            |
| 42   | 5033093      | 1   | INPUT PLATE ASSY                         |
| 43   | 5041961      | 8   | EXTERNAL RETAINING RING-CIRCLIPS 3/8" SH |
| 44   | 5020810      | 3   | M/I, D2415K                              |
| 45   | 5036528      | 1   | ADAPTER PLATE, MANIFOLD                  |
| 46   | 5037897      | 3   | GASKET, FOAM, HF PLATE                   |
| 47   | 5037022      | 3   | GASKET, THERMAL, HF PLATE                |
| 48   | 803-13014-06 | 12  | SCR, 8-32 X 3/8, FLT, HEX DR, BLK, ALLOY |
| 49   | 806-73056-12 | 12  | SCR,1/4-20 X 3/4,SKT,HEX,NO FIN, SS      |
| 50   | 5041676      | 1   | CAM BOSS,RIGHT                           |
| 51   | 5032772      | 4   | AIR SEAL CUP                             |
| 52   | 5037023      | 4   | GASKET, AIR SEAL CUP                     |
| 66   | 5041651      | 2   | HANDLE BAR                               |
| 71   | 5033092      | 1   | SIDE COVER, RIGHT                        |
| 72   | 5033297      | 1   | SIDE COVER, LEFT                         |
| 73   | 804-42111-12 | 8   | SCR,10-32 X 3/4,PAN,TORX,BLK ZINC,LCS    |
| 74   | 5026065      | 8   | #8-32 CHEESE HD, TORX, W/PATCH           |
| 76   | 881-21110-08 | 16  | SCR, 4 X 1/2,RND,PH,PB,BLK ZINC,LCS      |
| 77   | 61860        | 10  | T-NUT 8-32X11/32                         |
| 103  | 843-00110-06 | 12  | WASHER#10 .06 FLAT BLK                   |

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## COMPONENT EXPLODED VIEW



## COMPONENT PARTS LIST

| Item | Part No.     | Qty | Description                              |
|------|--------------|-----|------------------------------------------|
| 43   | 5041961      | 8   | EXTERNAL RETAINING RING-CIRCLIPS 3/8" SH |
| 50   | 5041676      | 1   | CAM BOSS, RIGHT, VTX-V20                 |
| 53   | 5037045      | 1   | PLATE, RIGGING, BOTTOM, RIGHT            |
| 54   | 5037044      | 1   | PLATE, RIGGING, FRONT, RIGHT             |
| 55   | 5037388      | 1   | PLATE, RIGGING, FRONT, LEFT              |
| 56   | 5039067      | 2   | FRONT HINGE                              |
| 57   | 5037750      | 2   | REAR HINGE                               |
| 58   | 5034688      | 10  | PIN BLOC                                 |
| 59   | 5034689      | 30  | BOLT, RIGGING_BLOCS                      |
| 60   | 5040943      | 1   | PLATE, RIGGING, BOTTOM, LEFT             |
| 61   | 5037123      | 2   | CAM_WHEEL                                |
| 62   | 5041675      | 1   | CAM BOSS, LEFT                           |
| 63   | 802-11010-10 | 6   | CR, 6-32 X 5/8, FLT, PH, BLK ZINC, LCS   |
| 64   | 5041180      | 2   | BALL_NOSE_SPRING_PLUNGER                 |
| 65   | 5031272      | 8   | PIN, HINGE                               |
| 67   | 5028168      | 4   | QRP, VTX, 1.5", LANYARD THRU BUTTON      |
| 68   | 804-41110-04 | 4   | SCR, 10-32 X 1/4, PAN, PH, BLK ZINC, LCS |
| 69   | 5037033      | 1   | PLATE, RIGGING, REAR, RIGHT              |

| Item | Part No.     | Qty | Description                          |
|------|--------------|-----|--------------------------------------|
| 70   | 5037389      | 1   | PLATE, RIGGING, REAR, LEFT           |
| 75   | 5011435      | 4   | E-RETAINING RING, 3/8" SHAFT         |
| 78   | 5040568      | 2   | STOP BOSS                            |
| 79   | 5039088      | 4   | HOUSING, HINGE PLUNGER               |
| 80   | 5034692      | 4   | HINGE PLUNGER                        |
| 81   | 446225-001   | 4   | SPRING, VXP89-DOLLY                  |
| 82   | 5040578      | 2   | INDEXING ARM                         |
| 83   | 5040579      | 2   | FLAG ARM                             |
| 84   | 5044692      | 1   | LABEL, ANGLE, RIGHT, NEW_GRAPHICS    |
| 85   | 5044693      | 1   | LABEL, ANGLE, LEFT, NEW_GRAPHICS     |
| 86   | 5042720      | 4   | SCR, SHLDR, DIA 3/16 X 1/4 8-32 TORX |
| 87   | 5042893      | 4   | SPRING, TENSION, INDEX, CLOSED_ONE   |
| 88   | 802-12056-04 | 4   | SCR, 6-32 X .25, FLT, TORX, SS       |
| 86   | 5042720      | 4   | SCR, SHDR, DIA 3/16X1/4 8-32 TORX    |
|      |              |     |                                      |
|      |              |     |                                      |
|      |              |     |                                      |