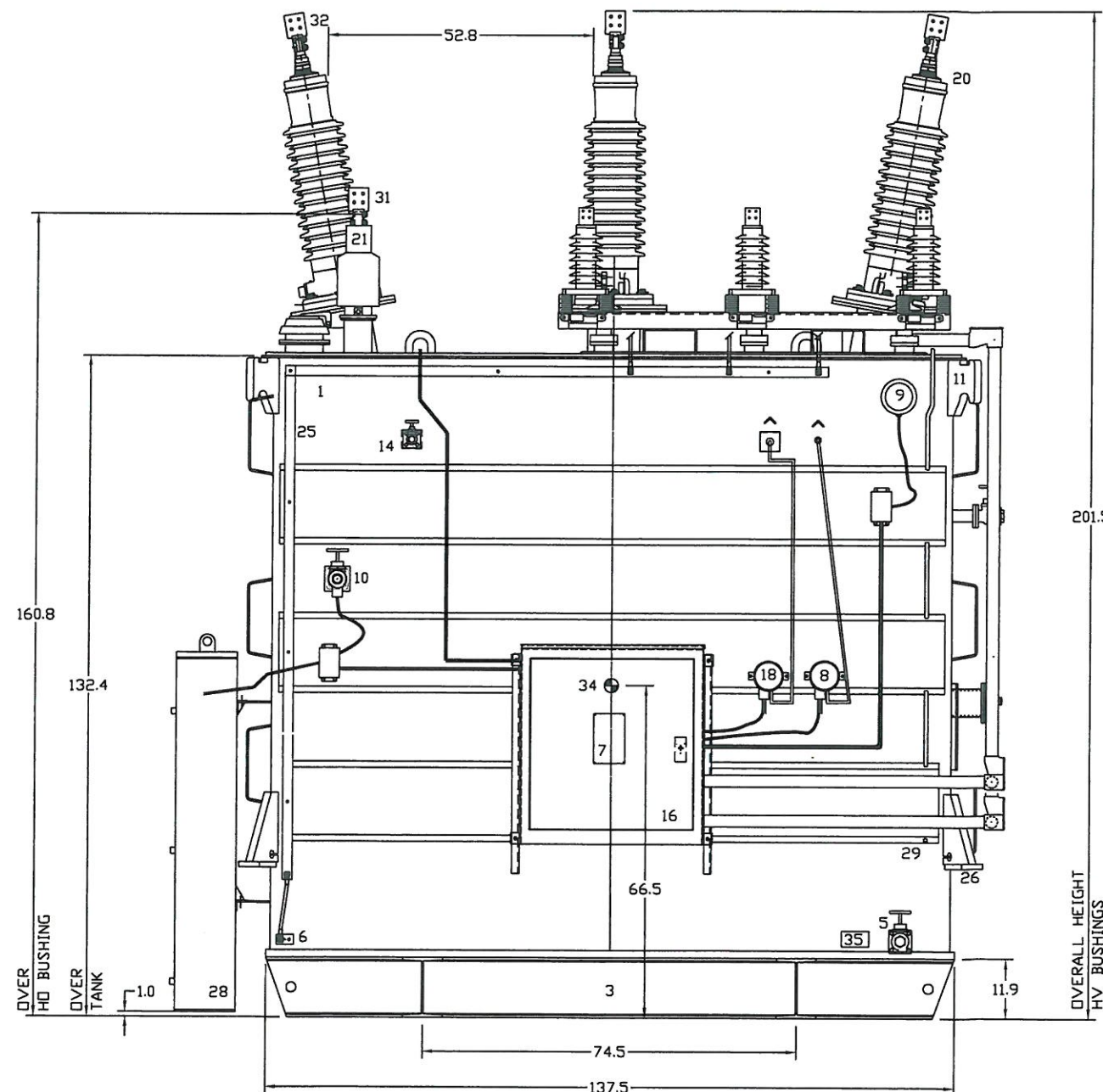


1	CHANGE
2	UNIT REDESIGNED BASED ON CUST. REQUEST
3	ITEM 23 CORRECTED
	U.L. MORRIS 05JAN09 F YANG 05JAN09
	U.L. MORRIS 20MAY09 F YANG 20MAY09

ABB INC.
SMALL POWER TRANSFORMERS
SOUTH BOSTON, VIRGINIA U.S.A.

APPROXIMATE NET WEIGHTS

CORE AND COILS -----	49778 LBS.
TANK AND FITTINGS -----	33455 LBS.
LIQUID -OIL ----- 4849 GAL.	34351 LBS.
APPROXIMATE TRANSFORMER SHIPPING WEIGHT -----	103574 LBS.
TOTAL WEIGHT -----	117584 LBS.
COOLER LIQUID TOTAL -- 324 GAL.	2437 LBS.
MAXIMUM COOLER ASSEMBLY WEIGHT EACH -----	1550 LBS.
(COOLER WEIGHTS ARE INCLUDED IN TANK WEIGHT)	
(COOLER LIQUID WEIGHT IS INCLUDED IN LIQUID WEIGHT)	



- 1 SEALED TANK - BRACED FOR 15 PSI - COLOR ANSI 61
- 2 WELDED COVER WITH GASKET AND LIFTING LOOPS FOR LIFTING COVER ONLY.
- 3 BASE - WITH 12.00" I-BEAM BASE WELDED IN PLACE DETAIL 1
- 4 REMOVABLE CORE GROUND - LOCATED IN WEATHER RESISTANT ENCLOSURE FOR MAIN TRANSFORMER
- 5 2.0 DRAIN VALVE/LOWER FILTER PRESS WITH .38 SAMPLER.
- 6 GROUND PADS - 2 HOLE NEMA DRILLING - 06 TOTAL.
- 7 NAMEPLATES AND WARNING DECAL
- 8 REMOTE DIAL TYPE THERMOMETER WITH ALARM CONTACTS.
- 9 MAGNETIC LIQUID LEVEL GAUGE WITH 2 ALARM CONTACTS.
- 10 RAPID PRESSURE RISE RELAY MOUNTED UNDER FLUID ON 2.00" GATE VALVE.
- 11 LIFTING HOOK FOR LIFTING COMPLETE TRANSFORMER
- 12 PANEL COOLERS.SEE FIELD FILLING INSTRUCTIONS
- 13 DE-ENERGIZED TAP CHANGER - WITH .38 HOLE FOR PADLOCKING.
- 14 2.0 VALVE FOR UPPER FILTER PRESS CONNECTION.
- 15 RELIEF DEVICE WITH ALARMS AND SEMAPHORE, OVER A 7.00 HANDHOLE.
- 16 CONTROL CABINET - WITH UNDRILLED ENTRANCE PLATE
- 17 SAFETY TETHER POLE MOUNT FOR ABB MANUFACTURING USE.
- 18 REMOTE HOT SPOT WINDING TEMPERATURE INDICATOR WITH ALARMS
- 19 LV BUSHING STYLE 41A05111-1 30.00 CL TO CL - SEE DETAIL 8
- 20 HV BUSHING STYLE 115W0800VQ 63.50 CL TO CL - SEE DETAIL 7
- 21 HO BUSHING STYLE 5028C99H01 SEE DETAIL 6
- 22 90 KV HV ARRESTERS - 3 TOTAL, STYLE NO. Q090SA070A
- 23 HV ARRESTER GROUND BAR
- 24 18 KV LV ARRESTERS - 3 TOTAL, STYLE NO. Q018SA015A.
- 25 LV ARRESTER GROUND BAR
- 26 JACKING PROVISIONS ON TANK FOR JACKING COMPLETE UNIT
- 27 MICARTA IDENTIFICATION TAGS
- 28 INERTAIR PERSERVATION SYSTEM WITH NITROGEN CYLINDER.(CYLINDER SHIPPED SEPRATELY) w/ PRESSURE GAUGE VISIBLE.
- 29 AUXILIARY GAS SPACE IN BRACES-REMOVE DRAIN PLUG, DRAIN FRONT & REAR, THEN REPLACE DRAIN PLUG BEFORE ENERGIZING UNIT.
- 30 20.00 DIA. MANHOLE WITH BOLTED ON COVER (2 PLACES).
- 31 HO BUSHING STUD ADAPTERS - TOTAL OF 1
- 32 HV BUSHING STUD ADAPTERS - TOTAL OF 3
- 33 BUSHING ID STENCILED
- 34 CENTER OF GRAVITY STENCILS
- 35 NON-PCB DECAL
- 36 DIGITAL IMPACT RECORDER.
- 37 HV DISCHARGE COUNTER FOR ARRESTER
- 38 LV DISCHARGE COUNTER FOR ARRESTER
- 39 KRENZ FANS STYLE #A9712 6-TOTAL
- 40 COOLER DRAIN VALVE

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NOTE: ALL EXTERNAL HARDWARE NON-CORROSIVE
** ITEMS ARE REMOVED FOR SHIPMENT

MIN. EXTERNAL HV LIVE TO LIVE	41.00"
MIN. EXTERNAL LV LIVE TO LIVE	6.50"
MIN. EXTERNAL HV TO GROUND	42.00"
MIN. EXTERNAL LV TO GROUND	6.00"



RENEWAL PARTS FOR OUTLINE

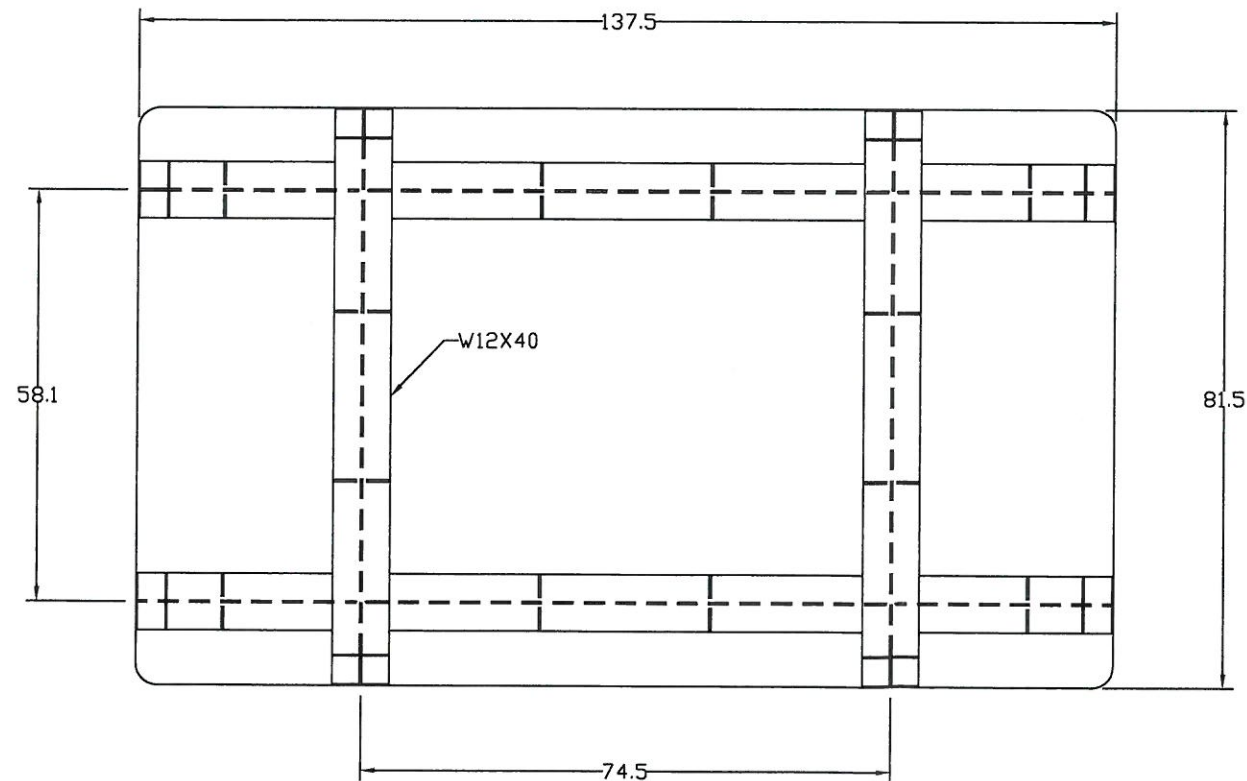
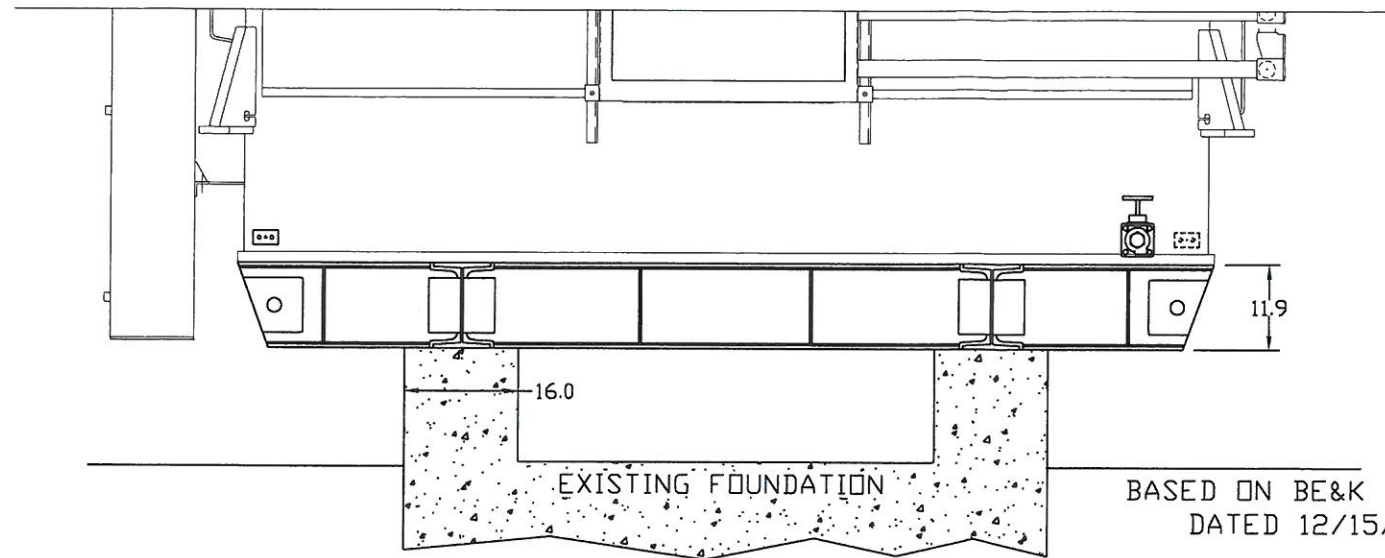
A SPARE SET OF ALL GASKETS AND
1 OF EACH STYLE BUSHING IS RECOMMENDED FOR STOCK.
FOR PRICES CONTACT YOUR FIELD SALES OFFICE

ORDER RENEWAL PARTS BY STYLE NUMBER AS FOLLOWS:

STYLE NUMBER = OUTLINE NUMBER - ITEM NUMBER - QUANTITY.
EXAMPLE: AB2960901-18-1.
FOR GASKETS ONLY PLACE A 'G' IN FRONT OF OUTLINE NUMBER
EXAMPLE: GAB2960901-18-1. (ONE GASKET)
EXAMPLE: GAB2960901 (ALL GASKETS)

DESIGNATES CENTER OF GRAVITY COMPLETE		TEMP RISE	ONAN/ONAF KVA -
FROM GROUND IN FRONT VIEW	54.56	55° C	20000/26700/33400
RIGHT OF CENTERLINE TOP VIEW	00.02	65° C	22400/29900/37400
ABOVE CENTERLINE TOP VIEW	04.66		
DESIGN IMPEDANCE	7.800 %		
HV 550 KV BIL LV 110 KV BIL			
APPARATUS POWER TRANSFORMER CLASS ONAN/ONAF/ONAF OUTDOOR			
60 HERTZ 20/26.7/33.4/37.4 MVA HV -115000-Y/66400- LV-DELTA 13800 3 PH			
DFTM WL MORRIS	01/10/09	115000-Y/66400- LV-DELTA 13800 3 PH	
CHKD F.Yang	01/10/09	115000-Y/66400- LV-DELTA 13800 3 PH	
APPD	01/10/09	115000-Y/66400- LV-DELTA 13800 3 PH	
SMALL POWER TRANSFORMER		DIMENSIONS IN INCHES-SCALE NTS	

CHANGE



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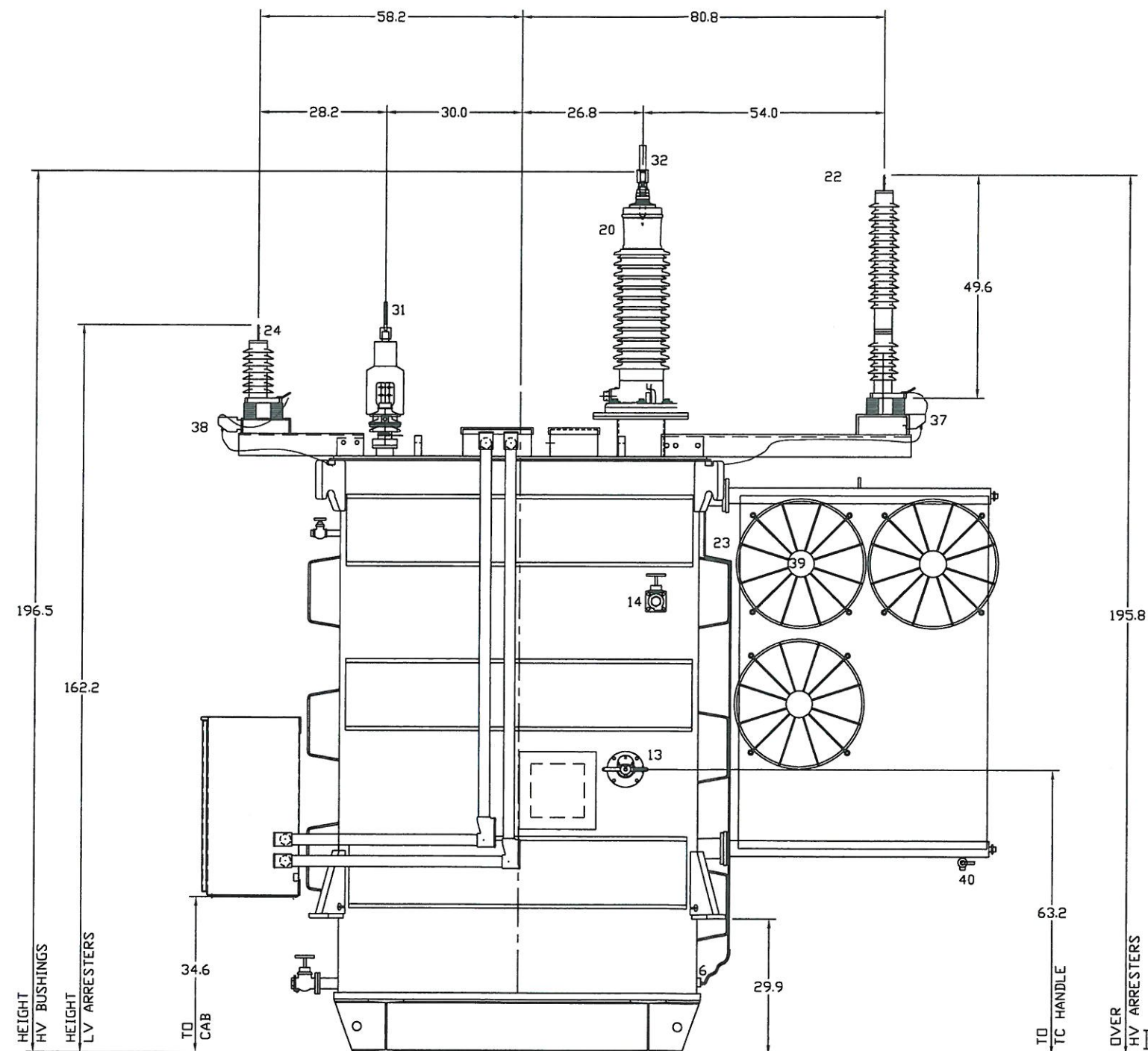
DETAIL NUMBER 01 - BASE
SHOP ORDER AB29609

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SOUTH BOSTON, VIRGINIA U.S.A.

DIMENSIONS IN INCHES - NTS

CHANGE



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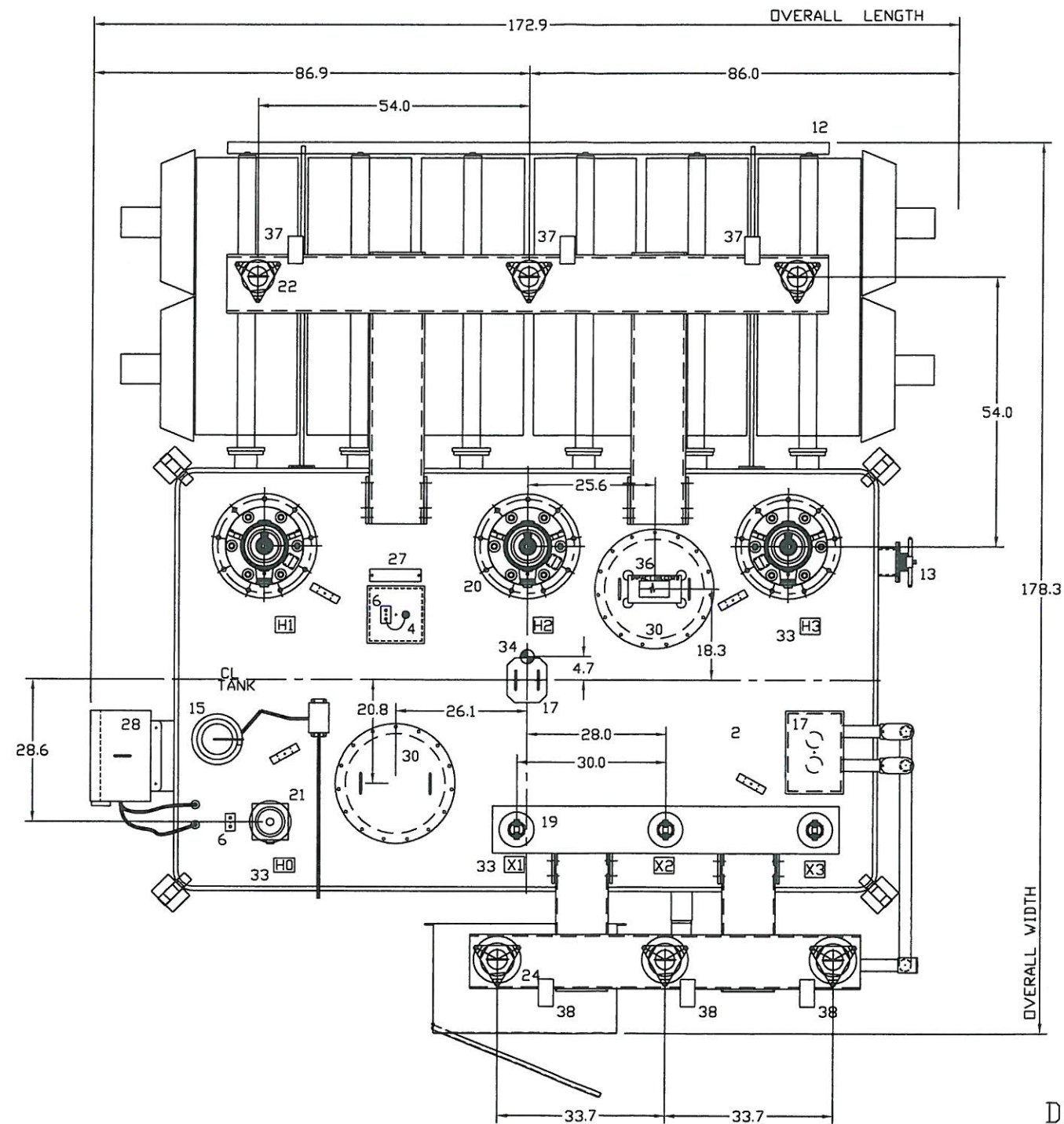
DETAIL NUMBER 02 - SEG IV
SHOP ORDER AB29609

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DETAIL NUMBER 04 - COVER DETAIL
SHOP ORDER AB29609

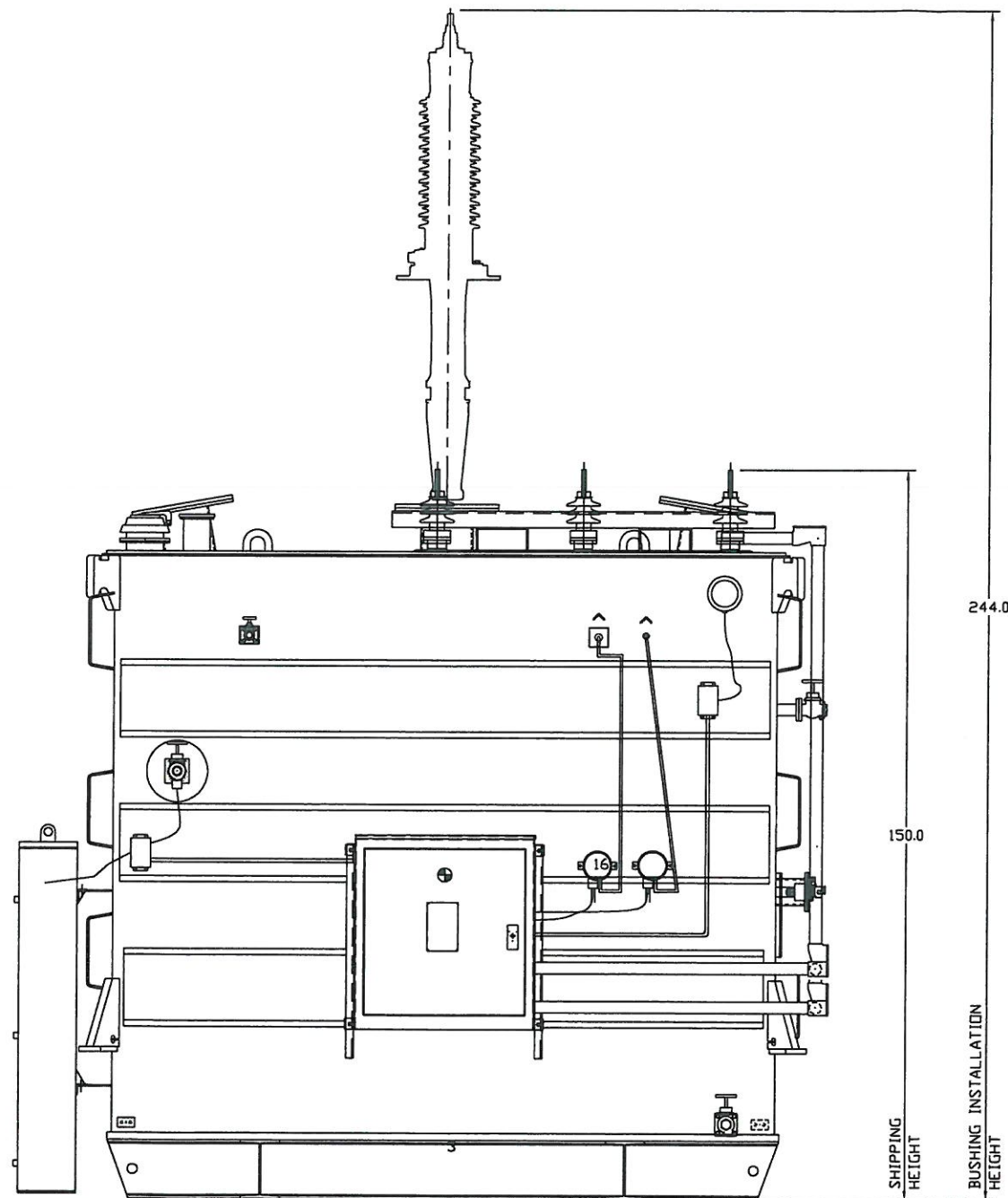
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DIMENSIONS IN INCHES - NTS



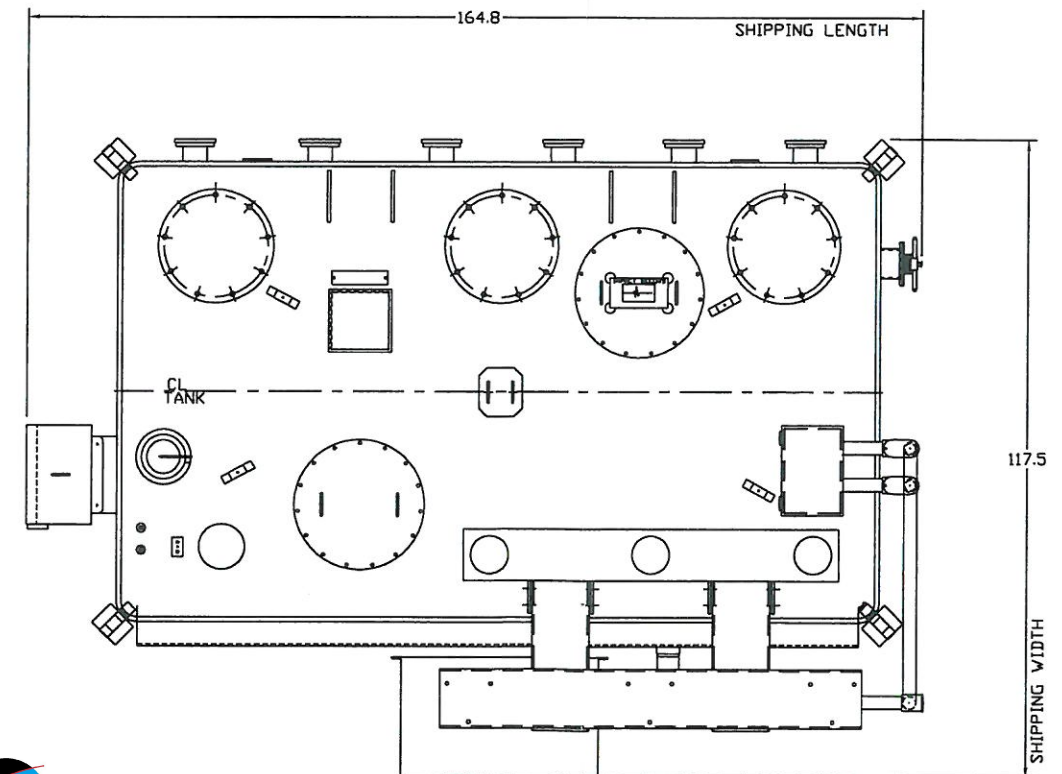
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DETAIL NUMBER 05 - SHIPPING DETAIL
SHOP ORDER AB29609

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DIMENSIONS IN INCHES - NTS