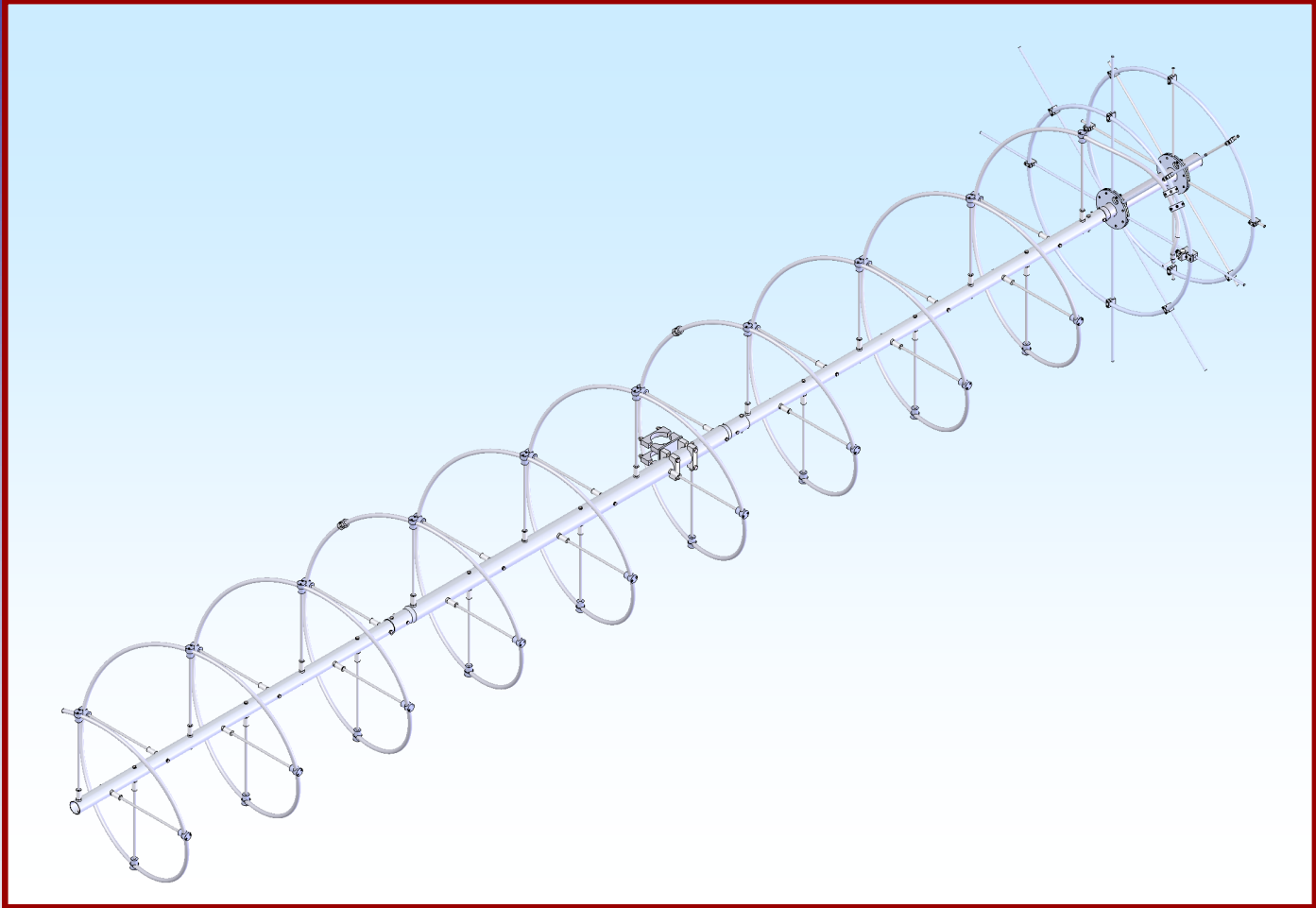




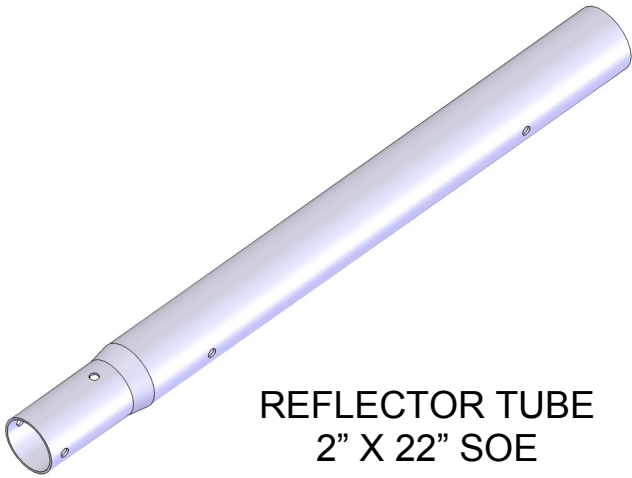
M2 Antenna Systems, Inc. Model No: 120-150-9



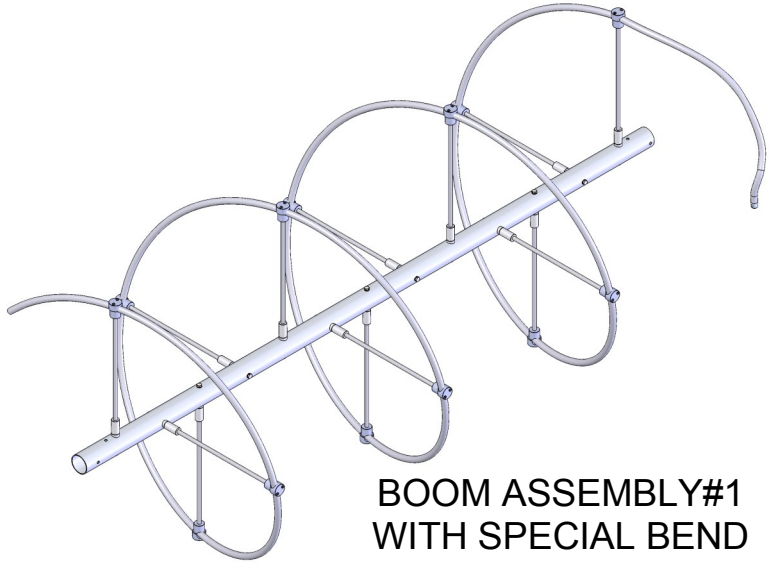
SPECIFICATIONS:

Model	120-150-9	Power Handling	1 kW, Higher avl.
Frequency Range.....	120 To 150 mHz	Stacking Distance.....	130"
*Gain	13.0 dBic Nominal	Boom Length / Dia.....	222" / 2" to 2.5"
Beamwidth	130 mHz = 36°	Turning Radius:	120"
Impedance.	50 Ohms Unbalanced	Mast Size.....	3.0"
VSWR	1.6 Typical	Wind Area.....	5.1 Sq. Ft.
Polarity	RHCP	Wind Survival	100 MPH
Elipticity	<3db	Weight.	39 Lbs.
Connector.....	Type "N" Female		

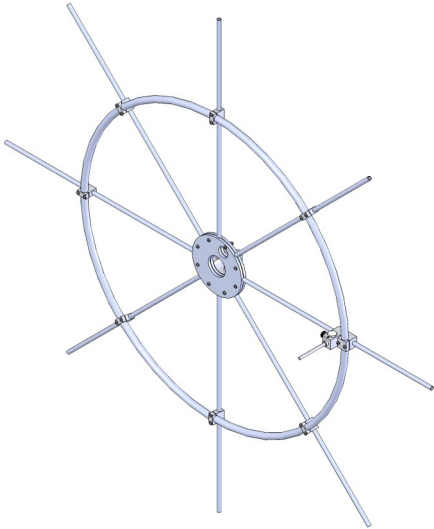
IDENTIFY PARTS & SUB-ASSEMBLIES



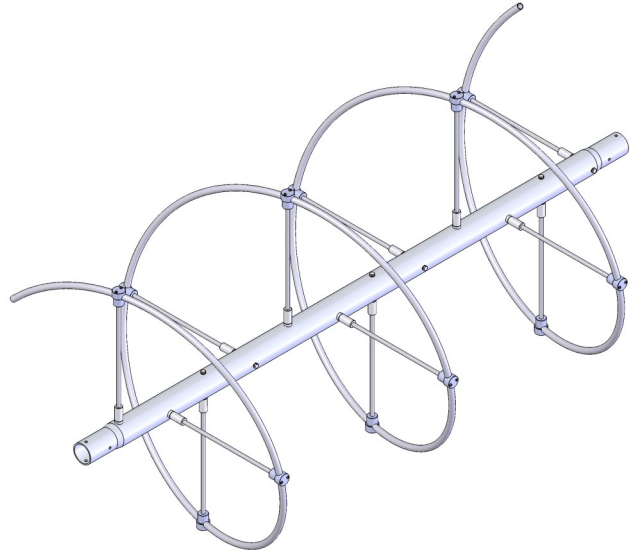
REFLECTOR TUBE
2" X 22" SOE



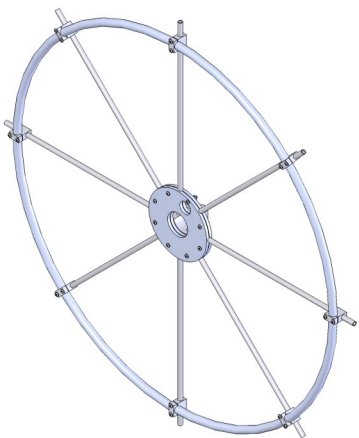
BOOM ASSEMBLY#1
WITH SPECIAL BEND
FOR FEED



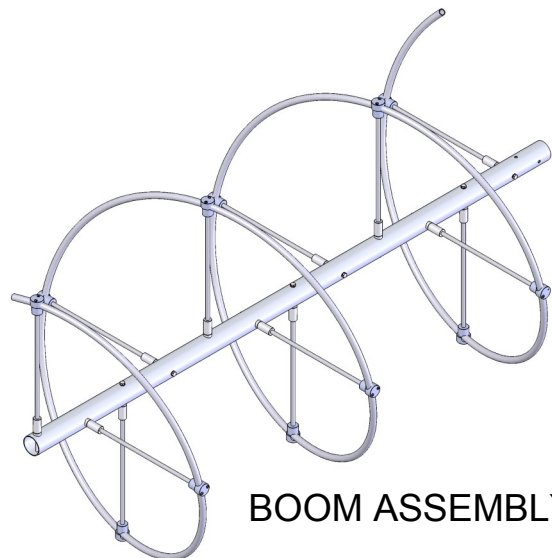
INNER
REFLECTOR ASSEMBLY
WITH FEED BLOCK ASSEMBLY



BOOM ASSEMBLY#2
2-1/2" BOOM (SBE)

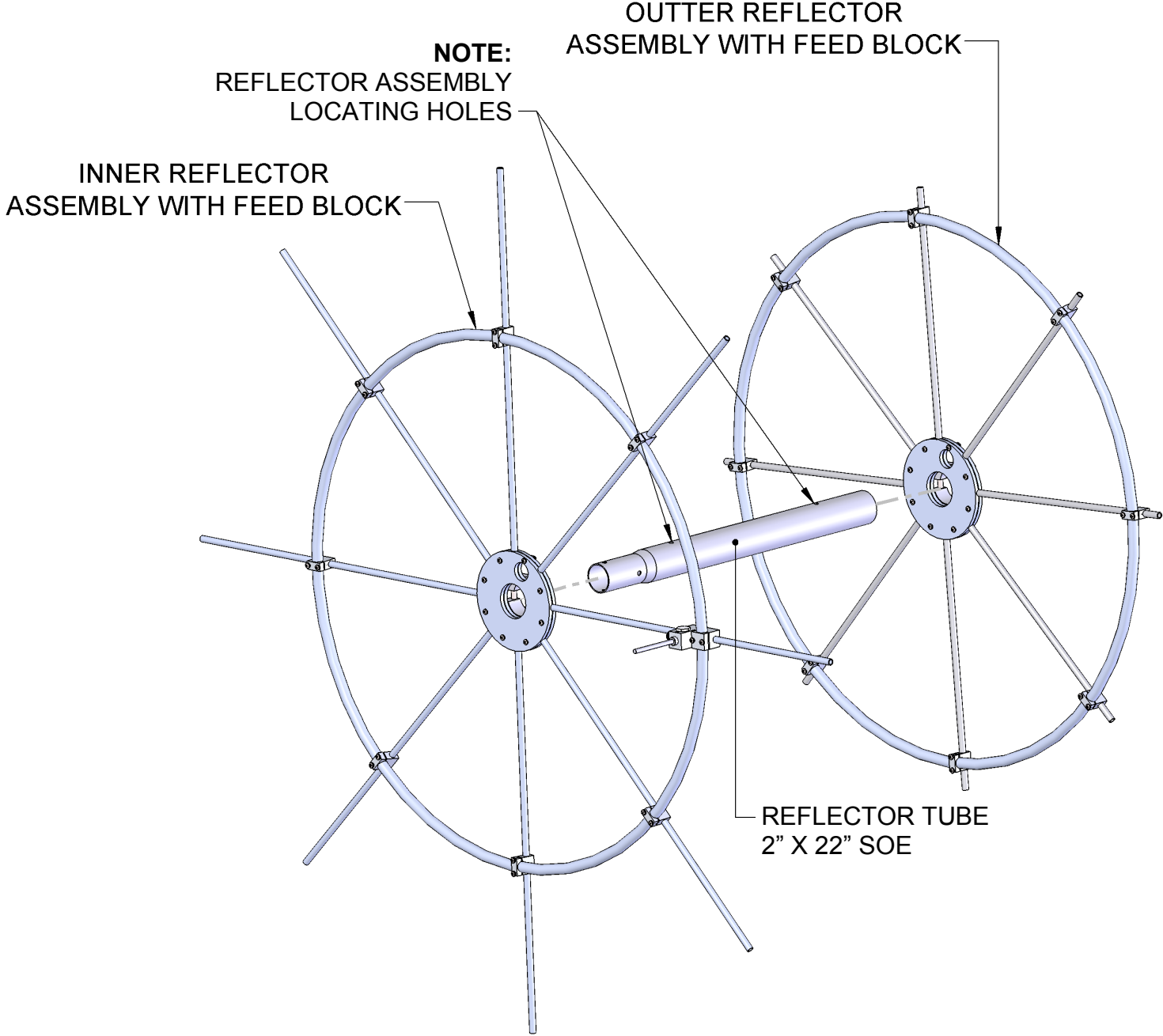


OUTER
REFLECTOR ASSEMBLY



BOOM ASSEMBLY#3

120-150-9 REFLECTOR ASSEMBLIES

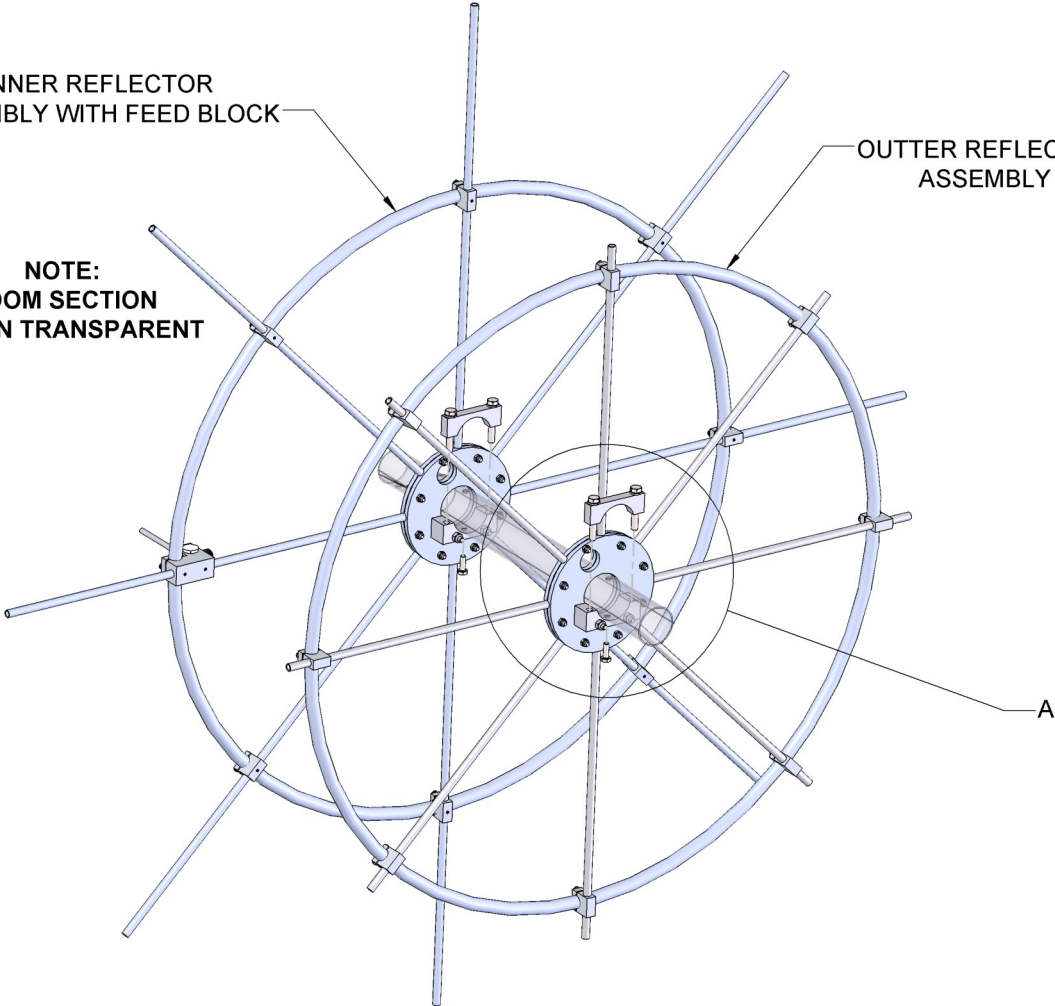


120-150-9 REFLECTOR ASSEMBLIES

INNER REFLECTOR
ASSEMBLY WITH FEED BLOCK

OUTTER REFLECTOR
ASSEMBLY

NOTE:
BOOM SECTION
SHOWN TRANSPARENT

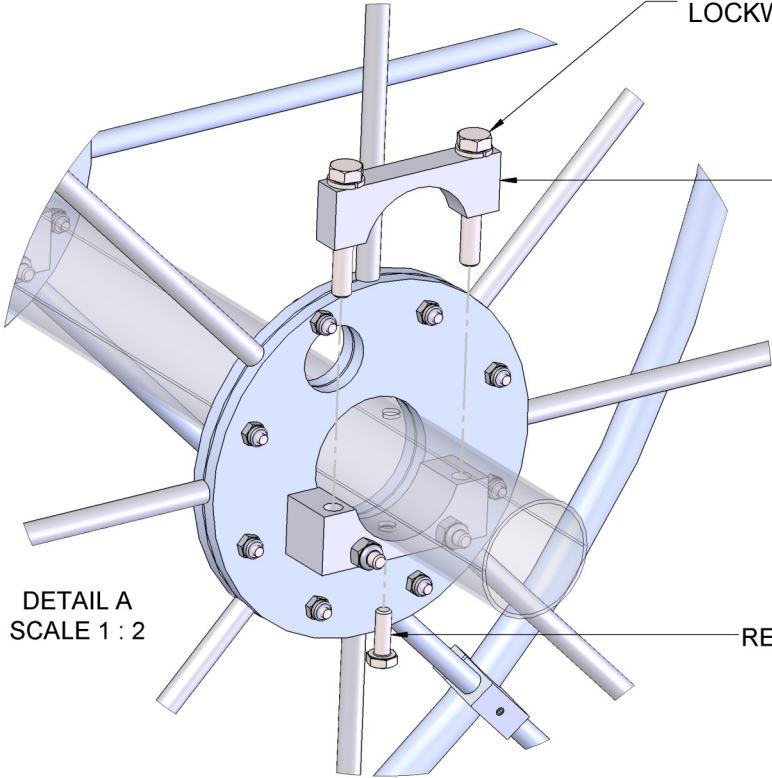


BOLT 5/16-18 X 2 1/4", SS
LOCKWASHER, 5/16, SS

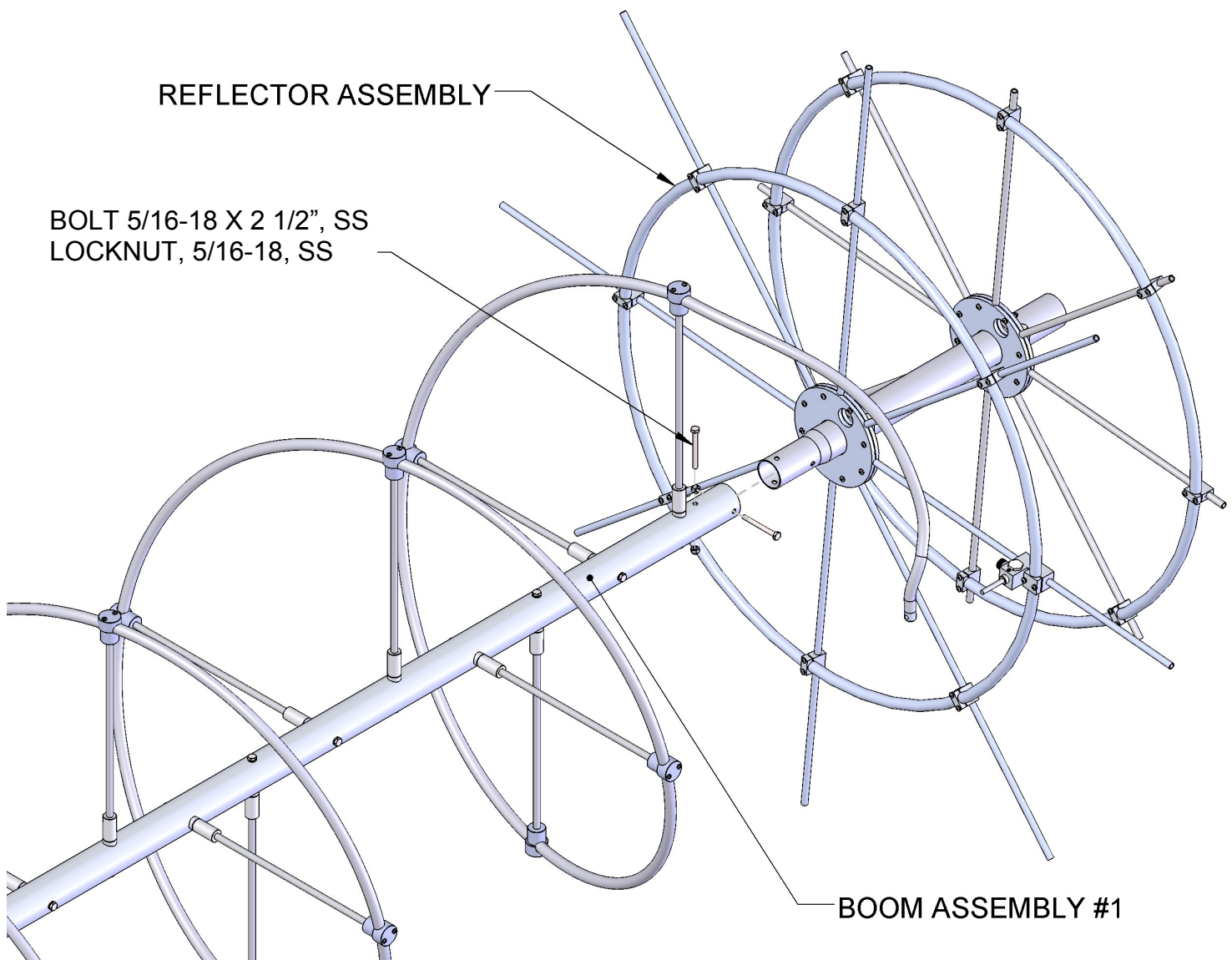
MACHINED CRADLE, 2"

DETAIL A
SCALE 1 : 2

REFLECTOR ASSEMBLY
LOCATING BOLT
1/4-20 X 3/4"



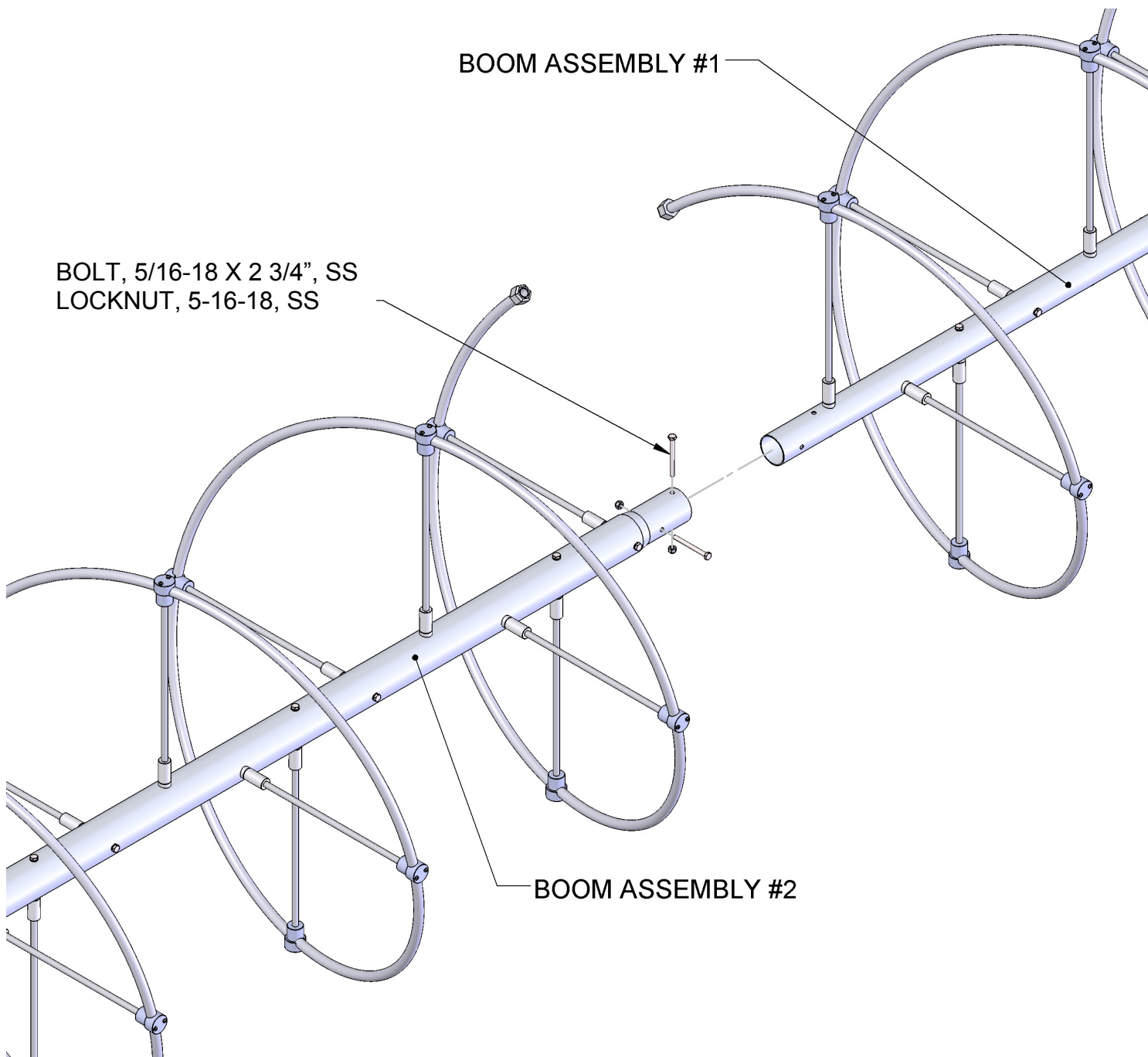
120-150-9 ASSEMBLY MANUAL



All 120-150-9 helical antennas have been pre-assembled and tested, so look for tune up position marks and labels on boom section and feed parts to help during reassembly.

Be sure to tighten boom joint hardware as to remove any clearance from the boom coupling.

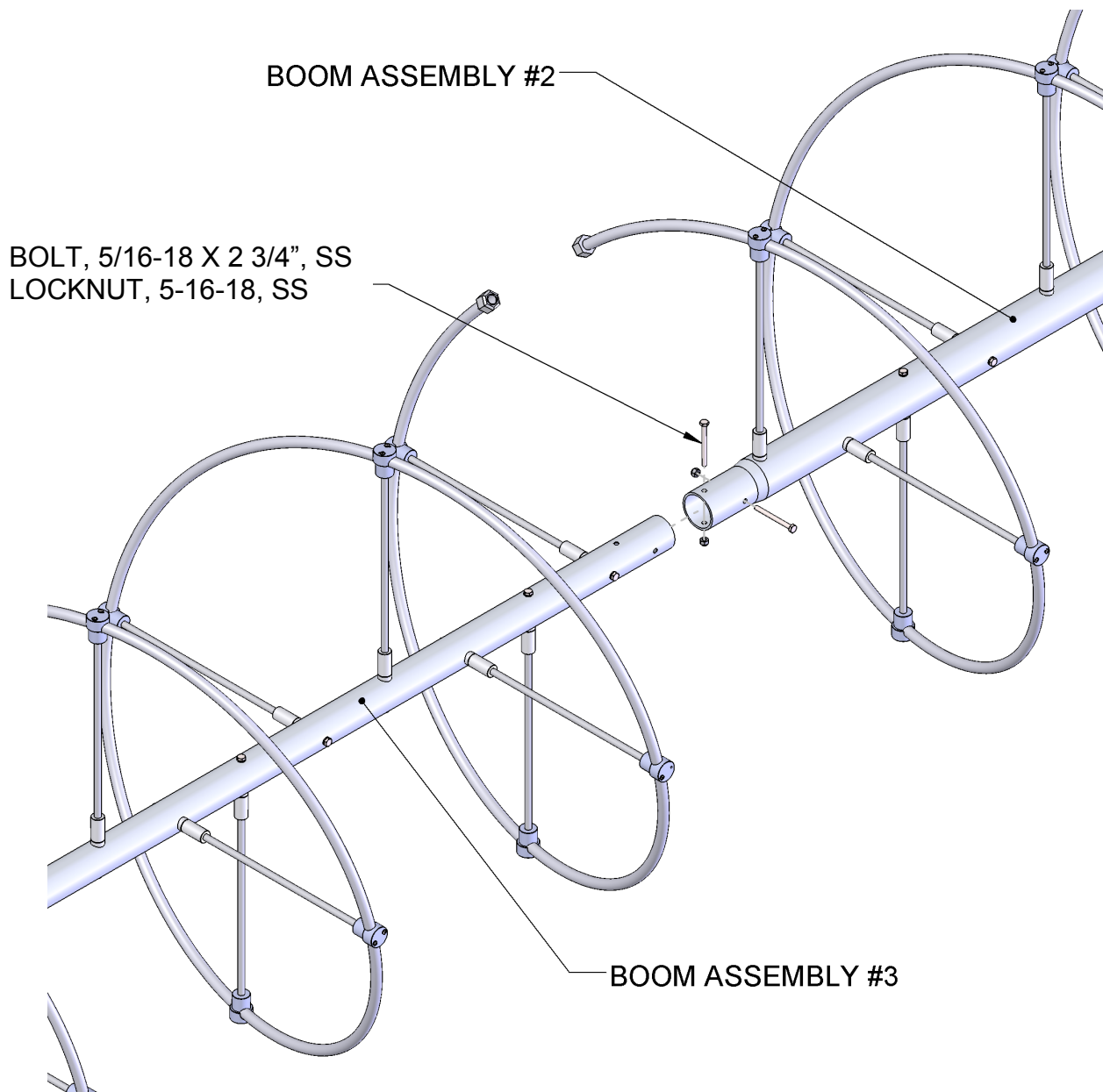
120-150-9 ASSEMBLY MANUAL



All 120-150-9 helical antennas have been pre-assembled and tested, so look for the couplings for connecting the helix tubes. Carefully flex the helix tube together and tighten the coupler.

Be sure to tighten boom joint hardware as to remove any clearance from the boom swage sections.

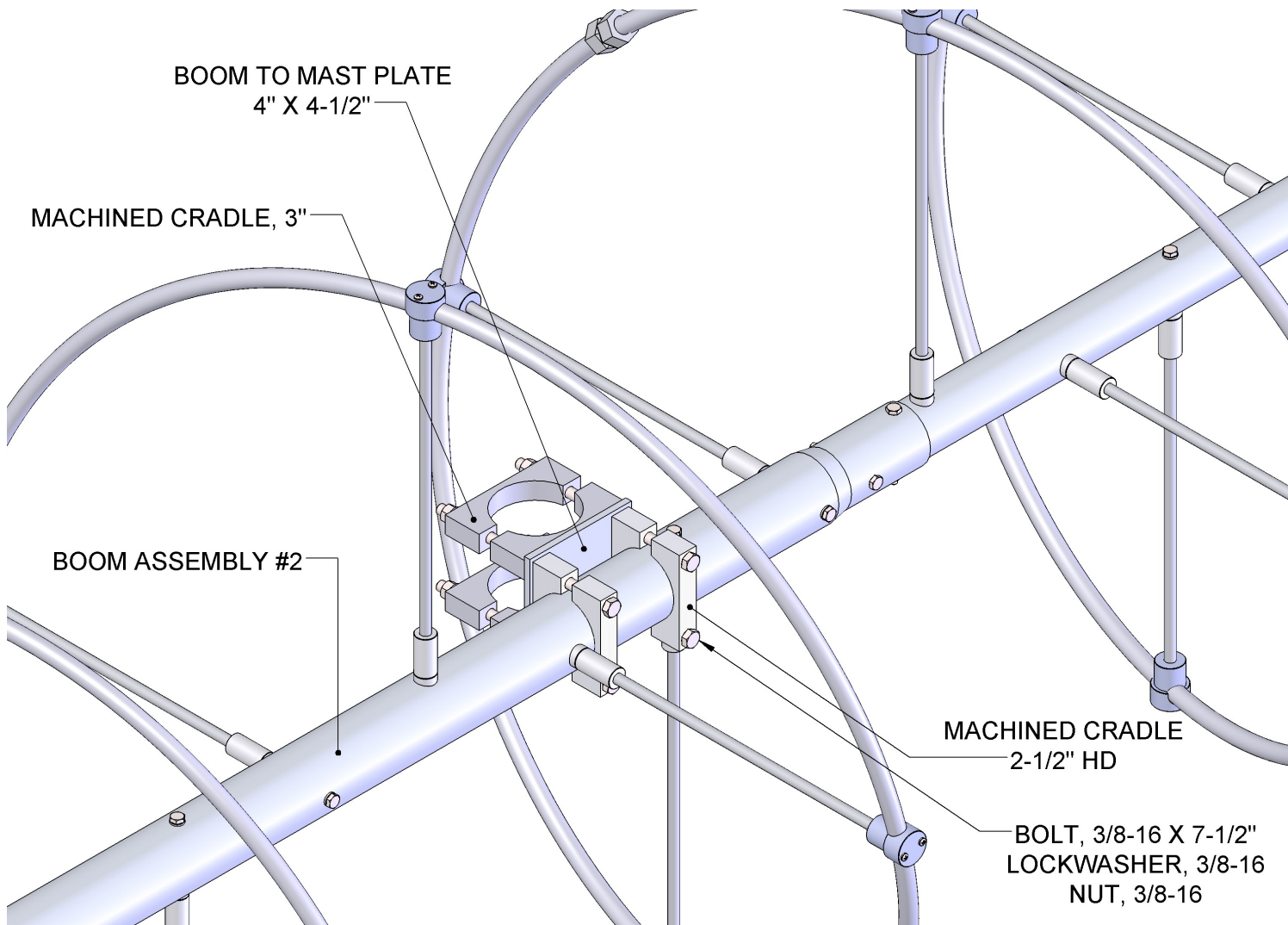
120-150-9 ASSEMBLY MANUAL



All 120-150-9 helical antennas have been pre-assembled and tested, so look for the couplings for connecting the helix tubes. Carefully flex the helix tube together and tighten the coupler.

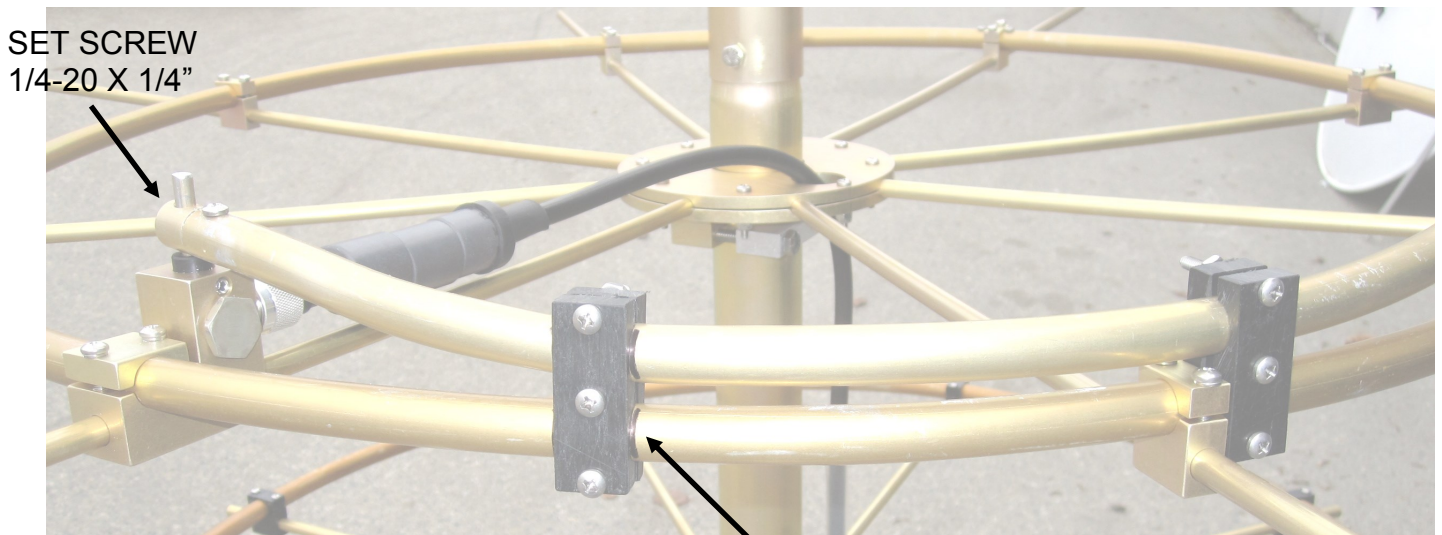
Be sure to tighten boom joint hardware as to remove any clearance from the boom swage sections.

120-150-9 ASSEMBLY MANUAL



Approximate boom to mast plate location.
From center of cradle to back of the antenna = 102"

120-150-9 FEED SUPPORT SPACERS



SET SCREW
1/4-20 X 1/4"

FEED SUPPORT
SPACERS (DELRIN)
USE: SCREW 8-32 X 1-1/4"
& NUT, 8-32

NOTE:
LOOK FOR BLACK LOCATING MARKS

All 120-150-9 helical antennas have been pre-assembled and tested, so look for any tune up marks for positioning the feed support spacers.

Carefully flex the feed end of the helix tube over the feed post, be sure to get the feed tube plug all the way down to the delrin insulator, and add the 1/4-20 x 1/4" set screw and tighten. Now add the feed support spacers to the marking on the helix tube and reflector ring, add the 8-32 screws and nuts and tighten.

It is always a good idea to test each antenna with a VNA or some kind of VSWR meter.

Be sure to use zinc paste on all aluminum to aluminum connection and water proof feed and feed connectors according to your water proofing techniques.

120-150-9 (PRE-ASSEMBLED)

DESCRIPTION.....	QTY
HELIX BOOM ASSEMBLY #1.....	1
HELIX BOOM ASSEMBLY #2.....	1
HELIX BOOM ASSEMBLY #3.....	1
REFLECTOR TUBE, 2" X .065 X 22" SOE.....	1
INNER REFLECTOR ASSEMBLY.....	1
OUTTER REFLECTOR ASSEMBLY.....	1
FEED SUPPORT SPACER, (DELRIN).....	4
BOOM TO MAST PLATE, 1/4" X 4" X 4-1/2".....	1
M-CRADLE, 2" (M2AMC0130).....	2
M-CRADLE, 2-1/2"HD (M2AMC0150).....	4
M-CRADLE, 3" (M2AMC0140).....	4
PENETROX (ZINC PASTE) CUP.....	1
ASSEMBLY MANUAL.....	1

HARDWARE:

BOLT, 3/8-16 X 7 1/2", SS.....	4
LOCKWASHER, 3/8", SS.....	4
NUT, 3/8-16, SS.....	4
BOLT, 5/16-18 X 2 3/4", SS.....	4
BOLT, 5/16-18 X 2 1/2", SS.....	2
BOLT, 5/16-18 X 2 1/4", SS.....	4
LOCKWASHER, 5/16",SS.....	4
LOCKNUT, 5/16-18, SS.....	6
BOLT, 1/4-20 X 3/4", SS.....	2
SET SCREW, 1/4-20 X 1/4", SS.....	1
SCREW, 8-32 X 1 1/4", SS.....	6
LOCKNUT, 8-32, SS.....	6
ALLEN KEY, 1/8".....	1

Note: Use penetrox or zinc paste on all re-assembled hardware.

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