Initial Manufacture and Test

1. Base Drive Assembly (A1000) and the Cell Assemblies (A2001 & A2002) without the prisms installed to be manufactured and assembled by Lick Shops. This includes aligning ball slides and screws to operate properly.
2. Install ADC in test fixture (A8001).
3. Perform initial mechanical tests without optics or dummy optics. This is the initial tests and tuning of servo motor operation.

Install Dummy Optics and Test

4. Rotate ADC to zenith in test fixture (A8001)
5. Remove Cladding & Frame Stiffeners (A1530)
6. Position Cell Assemblies at 1000 mm separation
7. Install Axial Clamp, Fwd (A2053, A2054, A2055) in Fwd Cell Assembly (A2001)
8. Glue Radial Spacer, Fwd (A2064, A2065, A2066) in Fwd Cell Assembly (A2001) with cyanoacrylate glue
12. Lower FWD Cell over Dummy Optic Assembly with ADC drive until contact is made with Axial clamps.
13. Install Retainer Optic, Fwd (A2044) 3 ea. & Axial Spacer, Fwd (A2045) 3 ea. to mount dummy optic.
14. Lower Prism Assembly Fixture A8060) and remove form ADC.
15. Install forward Frame Stiffener (A1530)
17. Pick up with forklift with thin edge of optic toward lift. Position Dummy Optic assembly in ADC under AFT Prism Cell. Center by hand.
18. Lower AFT Cell over Dummy Optic Assembly with ADC drive until dummy optic is above cell.
22. Raise AFT Cell over Dummy Optic Assembly with ADC drive until contact is made with axial clamps.
23. Glue o-ring sections A2040) 3 ea. into Retainer Optic, Aft (A2041) 3 ea.
24. Install Retainer Optic, Aft (A2041) 3 ea. to mount dummy optic.
25. Lower Prism Assembly Fixture A8060) and remove from ADC.

Alignment Check and Testing

27. Dummy optics to have 0.375" dia. hole thru with counterbore for mounting pin holes, crosshairs, center points, etc on inner surface.
28. Crosshair mount positions will be provided on Ring, Fwd (A1172) and Ring, Aft (1173).
29. Use crosshairs and pin holes to establish that axis of travel of Fwd Optic is collinear with axis of travel with Aft Optic an collinear with axis of instrument.
30. Install center point locaters in dummy optics and use square to determine tilt of optics to axis defined above.
31. Install Cladding
32 Perform mechanical tests, servo tuning and operation under full load at 3 elevation angles, 0, 45 and 90 degrees.
33 Life Test 36 hours at each of 3 elevation angles (0, 45 & 90 degrees) with software using DCS simulator.
34 Vibration test using accelerometer.
35 Remove cladding.
36 Pin all bolted joints, except Frame Stiffeners A1530, to preserve alignment.

Remove Dummy Optics and Install Optics
37 Rotate ADC to zenith in test fixture (A8001)
38 Remove Cladding & Frame Stiffeners (A1530)
39 Position prism cells at 1000 mm separation
40 Place Prism Assembly Fixture (A8060) on forklift and lift into position to support fwd dummy optic.
41 Remove Retainer Optic, Fwd (A2044) 3 ea. to release dummy optic.
42 Raise Fwd Cell over Dummy Optic Assembly with ADC drive until Dummy Optic Assembly is free of cell.
43 Remove Dummy Optic from ADC.
44 Remove Dummy Optic from Prism Assembly Fixture
45 Place Optic Assembly (A2012) on Prism Assembly Fixture (A8060), secure with Retainers (A8047).
46 Pick up with forklift with thick edge of optic toward lift. Position Optic Assembly (A2012) in ADC under FWD Prism Cell. Center by hand.
47 Lower FWD Cell over Optic Assembly with ADC drive until contact is made with Axial clamps.
48 Install Retainer Optic, Fwd (A2044) 3 ea. & Axial Spacer, Fwd (A2045) 3 ea. to mount Optic Assembly.
49 Lower Prism Assembly Fixture (A8060) and remove form ADC.
50 Install forward Frame Stiffener (A1530)
51 Place Prism Assembly Fixture (A8060) on forklift and lift into position to support aft dummy optic.
52 Remove Retainer Optic, Aft (A2041) 3 ea. to release Dummy Optic.
53 Lower AFT Cell over Dummy Optic Assembly with ADC drive until Dummy Optic is above cell.
54 Remove Axial Spacer, 3 ea. (A2060) from Aft Cell (A2002)
55 Remove Axial Clamp (A2050, A2051, A2052) from Aft Cell (A2002)
56 Raise AFT Cell over Dummy Optic Assembly with ADC drive until Dummy Optic Assembly is free of cell.
57 Remove Dummy Optic from ADC.
58 Remove Dummy Optic from Prism Assembly Fixture
59 Place Optic Assembly (A2012) on Prism Assembly Fixture (A8060), secure with Retainers (A8047).
60 Pick up with forklift with thin edge of optic toward lift. Position Optic Assembly (A2012) in ADC under FWD Prism Cell. Center by hand.
61 Lower AFT Cell over Optic Assembly with ADC drive until Optic Assembly is above cell.
62 Install Axial Clamp (A2050, A2051, A2052) in Aft Cell (A2002)
63 Install Axial Spacer, 3 ea. (A2060) in Aft Cell (A2002)
64 Raise AFT Cell over Optic Assembly with ADC drive until contact is made with axial clamps.
65 Install Retainer Optic, Aft (A2041) 3 ea. to mount Optic Assembly.
66 Lower Prism Assembly Fixture (A8060) and remove form ADC.
67 Install aft Frame Stiffener (A1530) & Cladding.