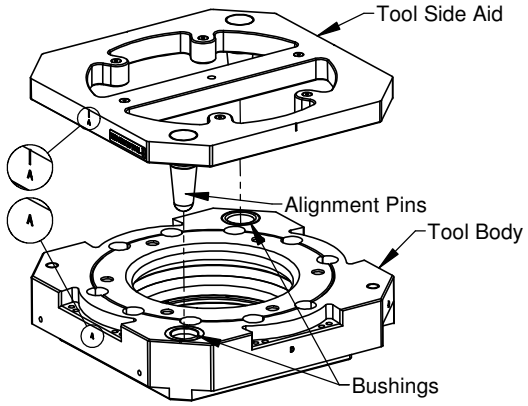
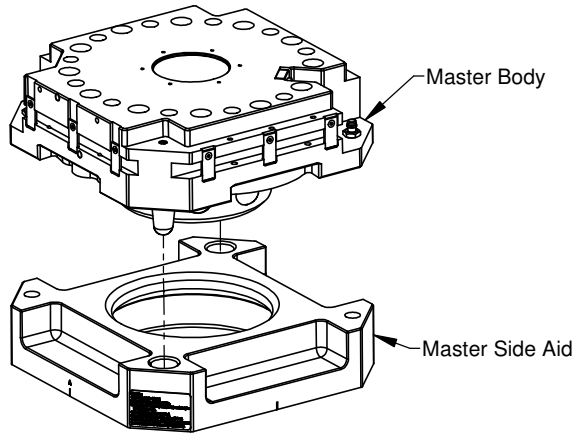
Rev.	Description	Initiator	Date
01	Initial Drawing	WB	9/20/07

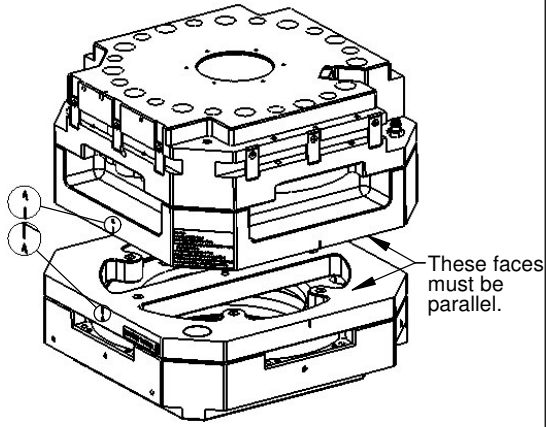
Step 1:
Place the Tool Body in the Tool Stand. Programs should be written with the Tool Plate resting in the Tool Stand.



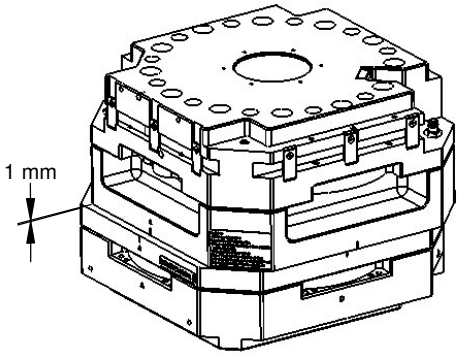
Step 2:
Mount the Tool Side Aid over the Tool Body by inserting the Locating Pins into the Bushings. Orient the Tool Side Aid such that the 'A' Flat corresponds to the 'A' Flat on the Tool Body.



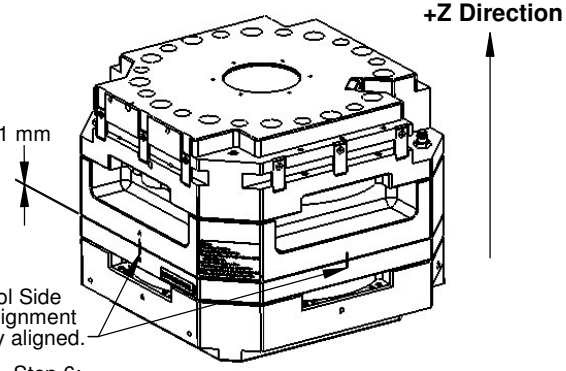
Step 3:
Mount the Master Side Aid to the QC Master Body ensuring that the taper pins enter the corresponsing holes in the Master Side Aid. Orient the Master Side Aid such that the 'A' Flat corresponds to the 'A' Flat on the Master Body. Energize the Locking Mechanism to secure the Master Side Aid in place.



Step 4:
Bring the Master Body Assembly to a position directly over the Tool Body Assembly. The Master Body Assembly's face should be parallel to the Tool Body Assembly's face. Ensure that the orientation of the Master and Tool assemblies are such that the Flat ID's correspond (i.e. 'A' Master to 'A' Tool, etc.).



Step 5:
Move the Master Body Assembly slowly downward until the Master and Tool Side Aids are approximately 1 mm apart.



Step 6:
Adjust the position of the robot to correct for any lateral misalignment. Use the Alignment Marks to align the Tool Side and Master Side Aids.

Step 7:
Record the robot coordinates from Step 6. A correction must now be made to the Z coordinate to account for the thickness of the Tool and Master Side Teaching Aids. Only in this way can the correct "Pick-up" and "Replacement" coordinates be determined. Peform the following calculation to determine the "Pick-up" and "Replacement" location:

Z "Pick-up" Coordinate = (Z Coordinate from Step 6) - (71 mm)

NOTES: UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING. DRAWN IN SOLIDWORKS.
ALL DIMENSIONS ARE IN MILLIMETERS.

3rd ANGLE PROJECTION

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WEIGHT LBS:	57.31
ASSEMBLY REF:	

TITLE: QC-310 Alignment Teaching Aids

SCALE	SIZE	DRAWING NUMBER
1:4	B	9230-20-2649-01

PRODUCT RELEASE # 060808-2 DATE: SHEET 1 OF 1