Chapter 2

Boat

Hull with Mid Plane

A. Save as "HULL MID PLANE".

Step 1. If necessary, open your **HULL** file from Chapter 1.

Step 2. Click File Menu > Save As.

Step 3. Key-in **HULL MID PLANE** for the filename and press ENTER.

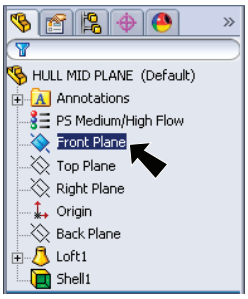

Fig. 1

B. Create Plane.

Step 1. Click **Isometric** on the Standard Views toolbar. (**Ctrl-7**)

Step 2. Click **Front Plane** in the Feature Manager, **Fig. 1**.

Step 3. **Ctrl drag** edge of Front plane in drawing area towards right side of sketch and release, **Fig. 2**. To Ctrl drag, hold down Ctrl and drag plane to right.

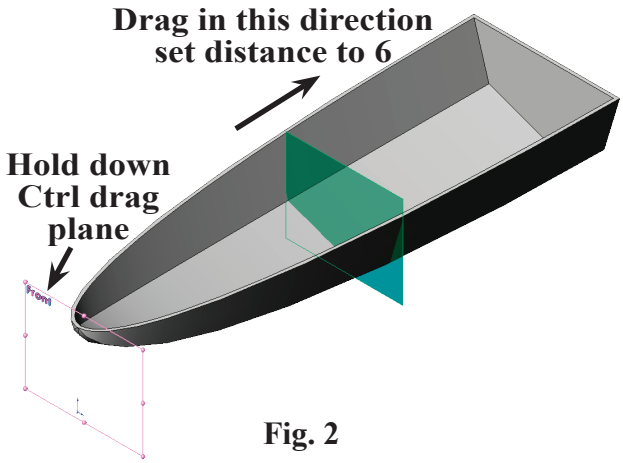

Fig. 2

Step 4. Key-in **6 for Distance** in the Property Manager, **Fig. 3** and click OK.

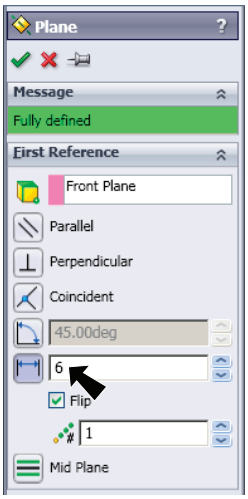

Fig. 3

C. Rename to Mid Plane and Reorder.

Step 1. **Rename Plane1** to **Mid Plane** in the Feature Manager, **Fig. 4**. To rename, click Plane1 name in Feature Manager and press **F2** on keyboard. Key-in **Mid Plane**.

Step 2. In the Feature Manager, **move Mid Plane above the Loft**. To reorder the plane, drag the plane and position over top of Back Plane. When the cursor changes to Arrow release the plane, **Fig. 5**.

Step 3. Save. Use **Ctrl-S**.

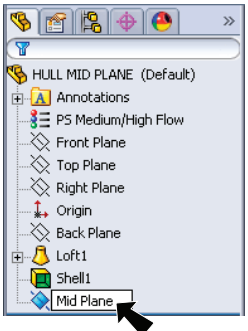

Fig. 4

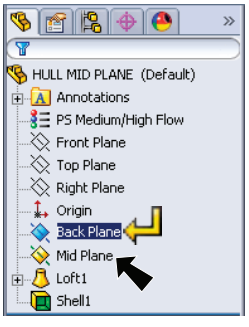

Fig. 5

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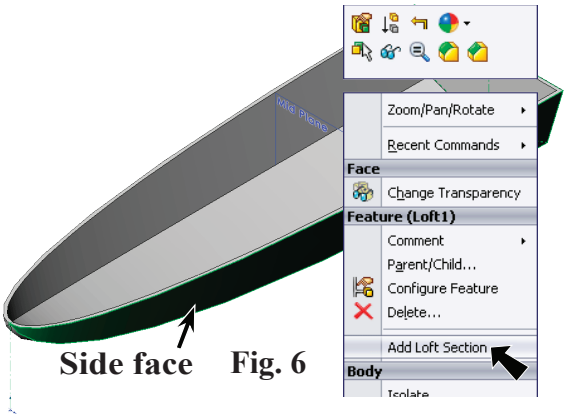
D. Add Loft Section.

Step 1. **Right click outside side face of hull** and click **Add Loft Section** from menu, **Fig. 6**.



Side face Fig. 6

Step 2. In the Add Loft Section Property Manager set:

check **Use selected plane**, **Fig. 7**

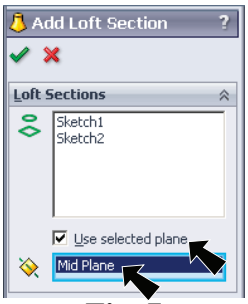
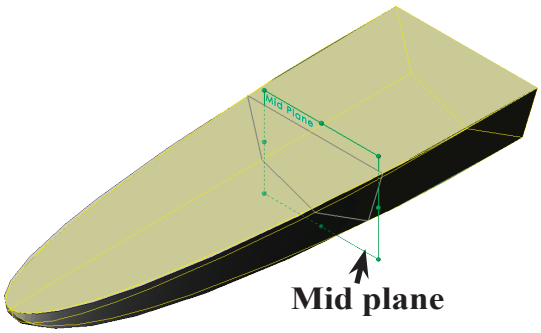


Fig. 7

click **Mid Plane in sketch**, **Fig. 8**

click OK .

Step 3. Save. Use **Ctrl-S**.



Mid plane

Fig. 8

E. Scale Sketch2 on Back Plane.

Step 1. **Expand Loft1** (click +) in the Feature Manager, **Fig. 9**. Click **Sketch2** and **Edit Sketch** from the Content toolbar. Sketch2 is in Back Plane at the rear of hull. We will scale down sketch to make sketch smaller and hopefully improve water flow.

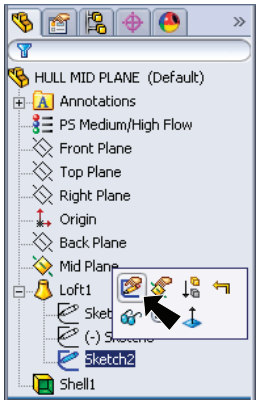


Fig. 9

Step 2. Click **Normal To** on the Standard Views toolbar. (**Ctrl-8**)

Step 3. **Delete all dimensions**, **Fig. 10**. Click dimension and press Delete key.

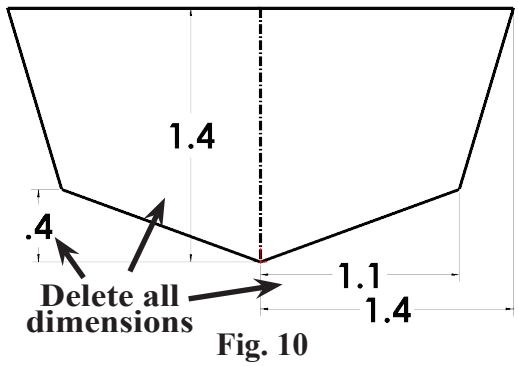


Fig. 10

Step 4. **Drag selection around the sketch** to select all entities (lines and dimensions), **Fig. 11**. To drag selection, click above and to left of sketch and drag down and to right to drag around all.

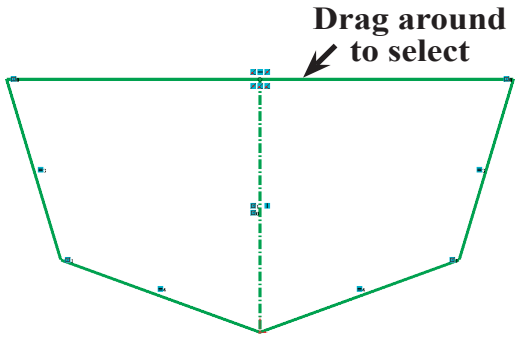


Fig. 11

Step 5. Click **Scale Entities**

on the Sketch toolbar. Or Tools Menu > Sketch Tools > Scale.

Step 6. In the Scale Property Manager set:
under Parameter,
Scale about:
click in Base Point

selection box, Fig. 12
click top endpoint of centerline, Fig. 13

Scale Factor **to .8**
click OK .

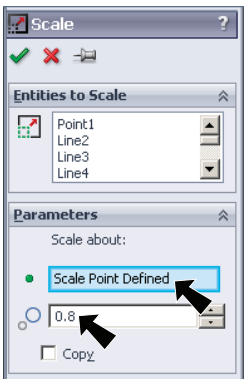


Fig. 12

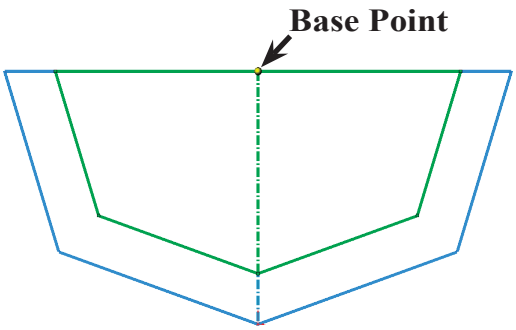


Fig. 13

Step 7. Click **Exit Sketch**

on the Sketch toolbar.

Step 8. Save. Use **Ctrl-S**.

F. Hide Mid Plane.

Step 1. Click **Mid Plane** in the Feature Manager and click **Hide** on Content menu, **Fig. 14**.

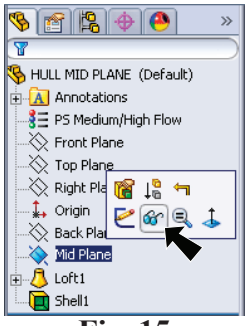


Fig. 15

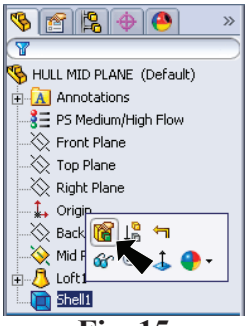


Fig. 15

G. Repair Shell.

Step 1. Click **Isometric** on the Standard Views toolbar. **(Ctrl-7)**

Step 2. Click **Shell1** in the Feature Manager and click **Edit Feature** from the Content toolbar, **Fig. 15**.

Step 3. In the Shell Property Manager set:
under Parameters:
right click in **Faces to remove box** and select **Clear Selections, Fig. 16**

click **top face of hull, Fig. 17**
click OK .

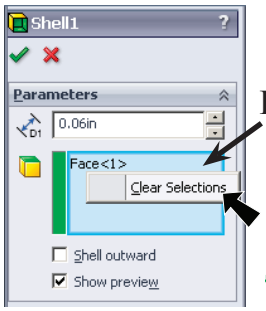


Fig. 16

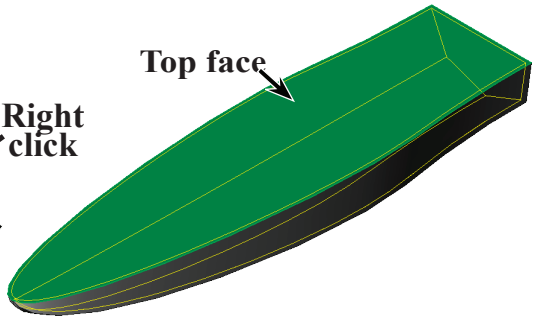


Fig. 17

Step 4. Save. Use **Ctrl-S**.

H. Modify Loft.

Step 1. Click **Loft1** in the Feature Manager and click **Edit Feature** from the Content toolbar, **Fig. 18**.

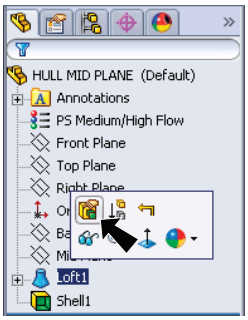


Fig. 18

Step 2. In the Loft Property Manager:
under Start/End Constraints, **Fig. 19**
expand Start/End Constraints and set**:**

Start Tangent Length: 1

End Tangent Length: .1

click OK .

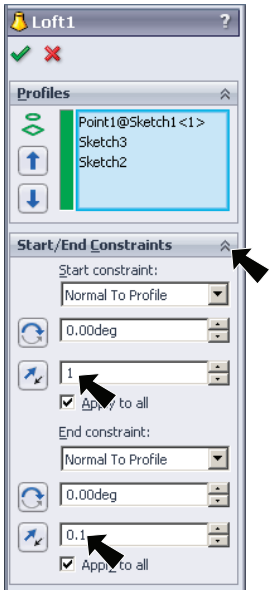


Fig. 19

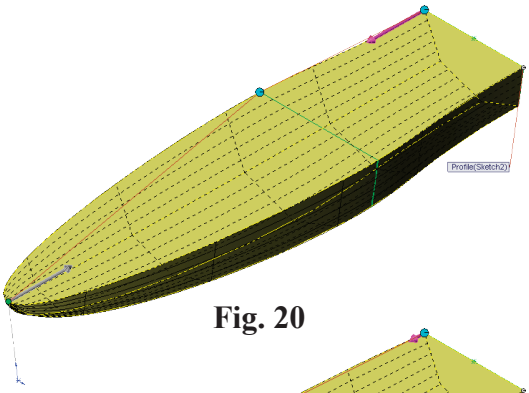


Fig. 20

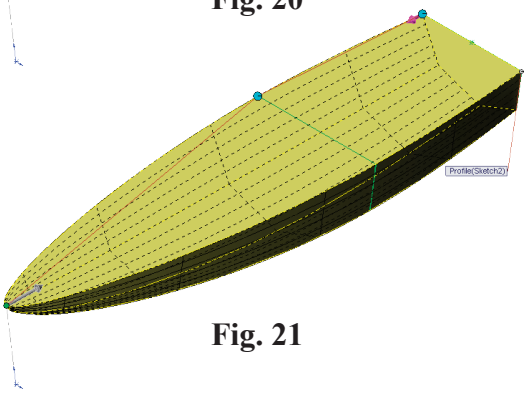
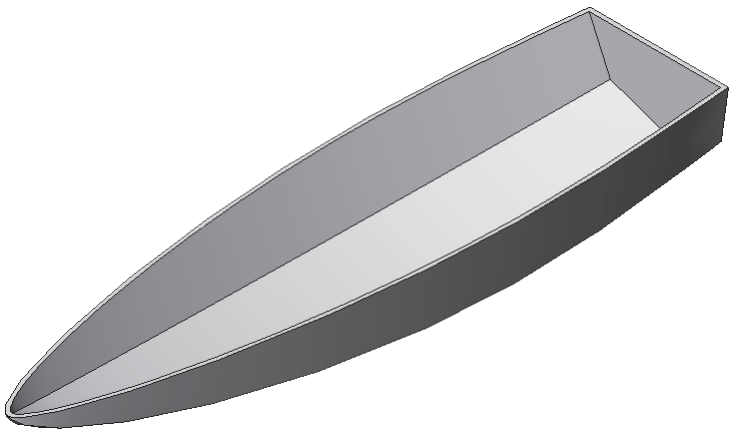


Fig. 21

Step 3. Save. Use **Ctrl-S**.