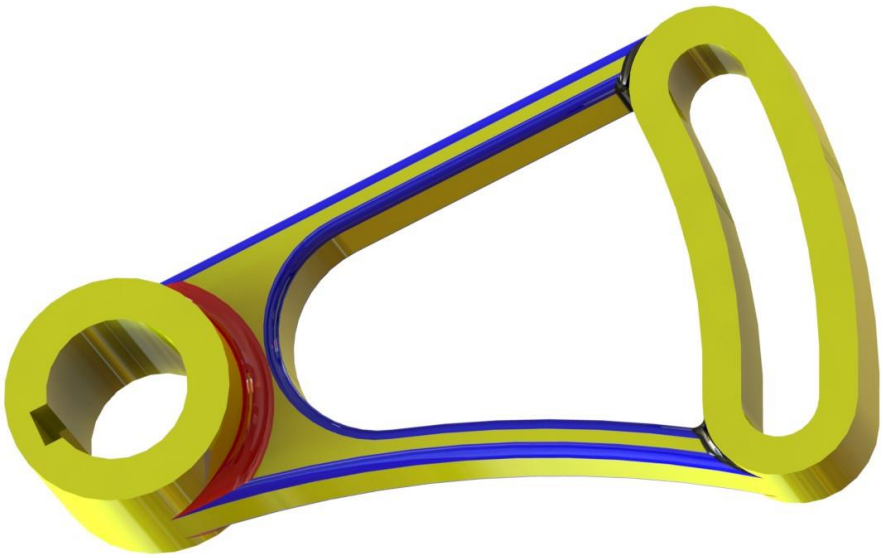
SOLIDWIZE

ONLINE SOLIDWORKS TRAINING

Model Mania 2008



Instructions

In this exercise, you will create two versions of the same part, and then run simulation analysis to compare the strengths of each part.

Begin by opening the file **Model Mania 2008.edrw** located in the exercise folder. This E-Drawing file describes the two phases of this exercise.

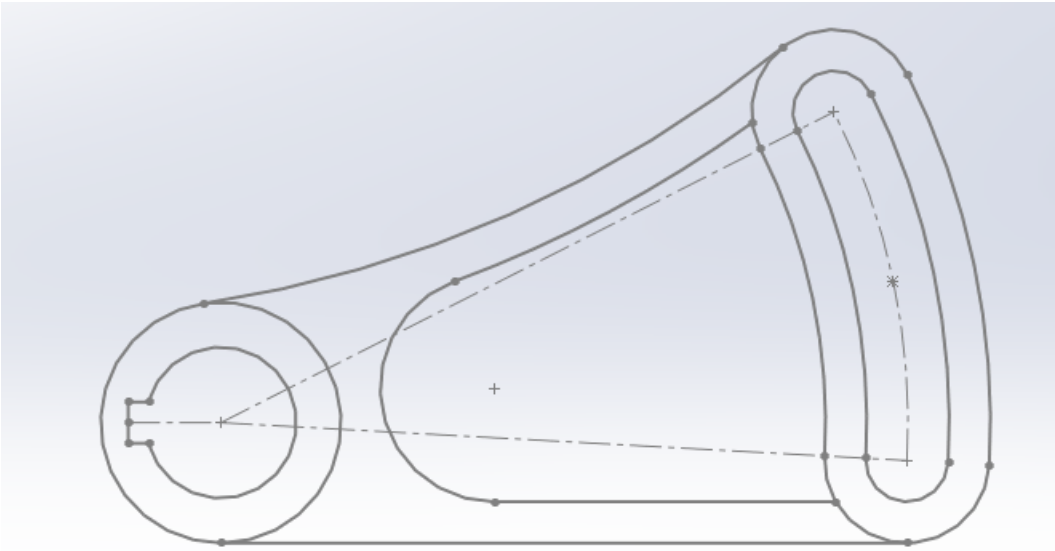
The first phase of the exercise requires you to create a part by following the drawings given. The second phase requires the creation of a new configuration of the part from phase 1. Simulation can then be run to compare the strengths of the two parts.

Here are some **Hints** that may help you in this exercise:

1. To create the slot, you may use one of the arc slot tools.

2. To correctly extrude each section, use the "From condition" option in the extrusion feature manager.

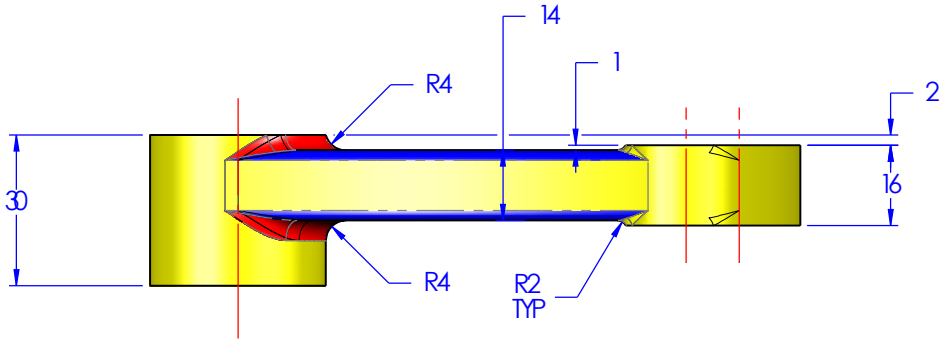
3. The 2mm fillet should not be included in the main sketch but rather added on as a feature. The main sketch is shown here below:

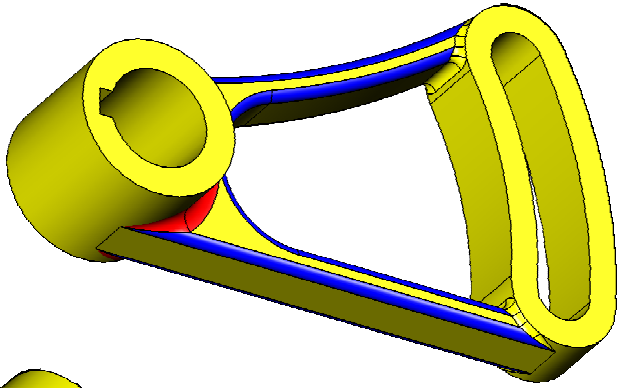


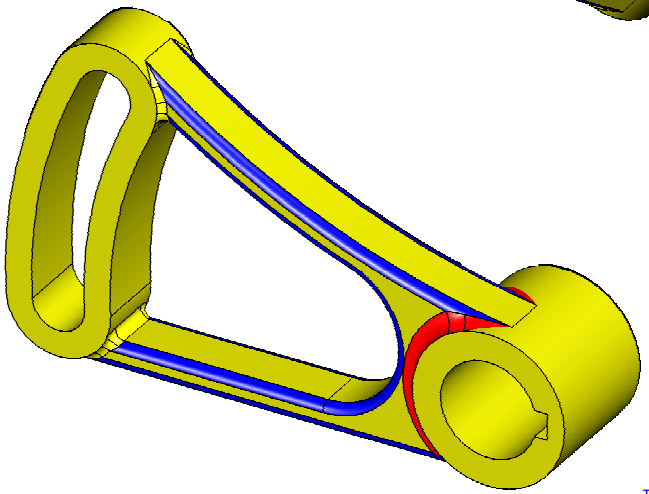
4. You may have to play around with the order of the fillets to get them to work correctly.

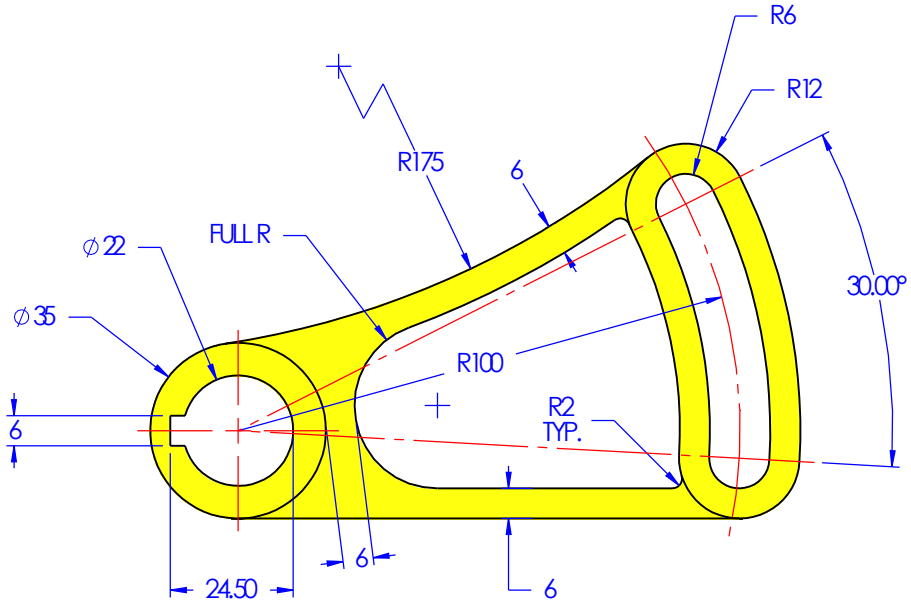
Phase 1 and Phase 2 of the exercise are also shown here in the following pages.

NOTES:
1. MATERIAL: AISI 1020
2. FILLETS COLORED BLUE - R2
3. FILLETS COLORED RED - R4



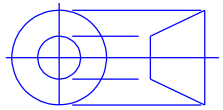






TANGENT EDGES
REMOVED FOR CLARITY

THIRD ANGLE PROJECTION



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	NAME	DATE
DRAWN BY	MAS	1-9-08

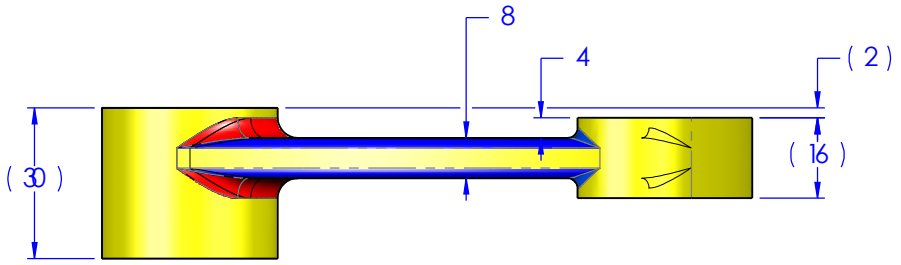
MATERIAL
AISI 1020

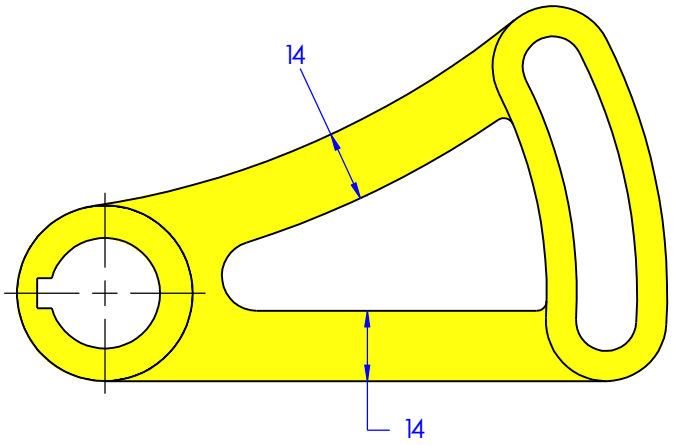
TITLE:
MODEL MANIA 2008 PHASE 1

SIZE	DWG. NO.	REV
A	PIVOT ARM	1

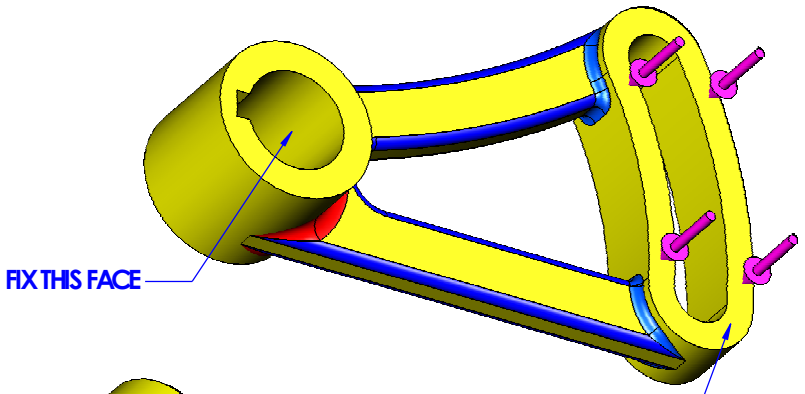
SCALE: 2:3 | WEIGHT: YOU TELL ME | SHEET 1 OF 2

NOTES: (FOR REFERENCE ONLY-NO CHANGES)
1. MATERIAL: AISI 1020
2 FILLETS COLORED BLUE = R2
3. FILLETS COLORED RED = R4

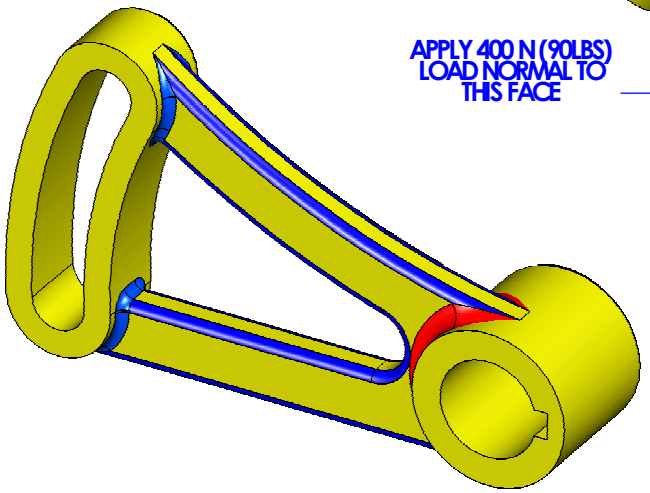




TANGENT EDGES
REMOVED FOR CLARITY



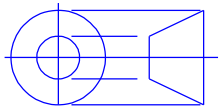
APPLY 400 N (90LBS)
LOAD NORMAL TO
THIS FACE



PHASE 2 CHANGES:

1. CREATE A NEW CONFIGURATION CALLED "PHASE 2".
2. FOR THIS CONFIGURATION ONLY, MAKE THE CHANGES INDICATED IN THE VIEWS ABOVE. (DIMENSIONS IN PARENTHESIS ARE FOR REFERENCE ONLY.)
3. USE COSMOSXPRESS OR COSMOSWORKS TO ANALYZE THE 2 CONFIGURATIONS AND DETERMINE WHICH IS STRONGER (HIGHEST FACTOR OF SAFETY).
4. RECORD THE FACTOR OF SAFETY FOR EACH VERSION OF THIS PART IN THE REGISTRATION PROGRAM.

THIRD ANGLE PROJECTION



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	NAME	DATE
DRAWN BY	MAS	1-9-08

MATERIAL
AISI 1020

TITLE:
MODEL MANIA 2008 PHASE 2

SIZE	DWG. NO.	REV
A	PIVOT ARM	1

SCALE: 2:3 | WEIGHT: YOU TELL ME | SHEET 2 OF 2