Stirling Engine Questions, Part 1 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A diagram of a device

Description automatically generatedIn diagram #1, on the right…

1. What is the position of the displacer crank? *Highest Point Lowest Point Middle*

2. Where in the cylinder is the displacer?

*Top Bottom Middle*

3. Where is most of the air in the cylinder?

*Top Bottom Middle*

4. What is happening to the motion of the air molecules in the cylinder?

*Speeding up Slowing Down Nothing*

5. Why is this happening to the air molecules in the cylinder?

6. What is happening to the power piston?

*It’s being forced upward*

*It’s being forced downward*

*It’s not moving*

7. Why is this happening to the power piston?

8. What is happening to the mass of the air inside the cylinder?

*Increasing decreasing No change*

9. Explain why this is happening to the mass?

10. What is happening to the volume of the air inside the cylinder?

*Increasing decreasing No change*

11. Explain why this is happening to the volume of the air in the cylinder?

12. What is happening to the density of the air in the cylinder?

*Increasing decreasing No change*

13. Explain why this is happening to the air’s density.

Diagram of a diagram of a device

Description automatically generated with medium confidenceIn diagram #2 (on the right)…

14. What is the position of the displacer crank? *Highest Point Lowest Point Middle*

15. Where in the cylinder is the displacer?

*Top Bottom Middle*

16. Where is most of the air in the cylinder?

*Top Bottom Middle*

17. What is happening to the motion of the air molecules in the cylinder?

*Speeding up Slowing Down Nothing*

18. Why is this happening to the air molecules in the cylinder?

19. What is happening to the power piston?

*It’s being forced upward*

*It’s being forced downward*

*It’s not moving*

20. Why is this happening to the power piston?

21. What is happening to the mass of the air inside the cylinder?

*Increasing decreasing No change*

22. Explain why this is happening to the mass?

23. What is happening to the volume of the air inside the cylinder?

*Increasing decreasing No change*

24. Explain why this is happening to the volume of the air in the cylinder?

25. What is happening to the density of the air in the cylinder?

*Increasing decreasing No change*

26. Explain why this is happening to the air’s density.