

# Chapter 9

## Gasoline Engine Operation, Parts, And Specifications

R L H W N K Y Z I K O Y F H X B M L F C P P M G R D L M N K R  
 K R R T Q N T L B N R I D C P M O C O N N E C T I N G R O D H  
 T Y M R P L M M R Q T Y L L R P Y T N Q D K M H B O R E R K K  
 L H Q L T W F E T X K A F G P A P R T R R M G R Z L V C H C Y  
 Q G G C X N Q C Q W N R K V A M N I M O L C L J Q M Y N O T E  
 X Y N T X X M H P V T L Q E M L M K S L M B P G N T M L W N R  
 E D D I S P L A C E M E N T V E L R S T M D T L P D B N I R Q  
 X K P Z K M F N B O X R M R L A D E O H O X E T Q W F G J N S  
 T K T X L P R I W J M J J C M R L I R T A N G A H X N G F T T  
 E C J G X K Y C R Y J B Y L E L T V R I A F S D D E N N W B R  
 R W R N X Q W A L W L C U G W A C E E C E R T T D C G K M P O  
 N M C L G M Q L X W E N R S R N W K X X C S Y O R I E L Y J K  
 A B O L R F B F H K H A K N T O V E P H F N R E S O L N T P E  
 L O M T P H L O O R H W O K P I K J N K A H Z E N D K Z T N D  
 C X B J F Q N R D C X I V L P A O R R D S U D N Q G L E Y E C  
 O E U M C L T C R T S W A V C C M N J U R K S X T J I R L R R  
 M R S N Q S T E Y S F C B N G Y G R P Q C J G T T R Z N E N D  
 B G T X R B P F E G I F A Z B C J B R O T L M K V J X D E D O  
 U Z I U W U R R C N D P L J L L Z W L X K M V P K A N H D W V  
 S C O L S L P W A T V J B M Z E T B F P D L L M F I L H H P E  
 T F N Z V M X H J Z J Y L Z H F N N L C V X J X L W C V M R R  
 I P C P O T C C A M S H A F T I W G N C Q M Y Y R W G Q E I H  
 O N H C R E R H G X Q J Z K M G P F N M P K C T T Z M R C N E  
 N Y A W M T X Q V X D T L A N O N P R I N C I P A L E N D C A  
 E M M J M T Y T U R B O C H A R G E R T J M F K N X R X Y I D  
 N P B G C B B F H T O P D E A D C E N T E R K K P N M J V P V  
 G W E H M M M G V D D N A T U R A L L Y A S P I R A T E D A A  
 I R R J I N T E R N A L C O M B U S T I O N E N G I N E G L L  
 N N G X H D R S I N G L E O V E R H E A D C A M S H A F T E V  
 E M Q T Z M T R M T T M C Z W A N K E L E N G I N E F H Z N E  
 W D O U B L E O V E R H E A D C A M S H A F T L N K L B C D Q

<http://jameshalderman.com>

|                     |                            |                     |                          |
|---------------------|----------------------------|---------------------|--------------------------|
| Block               | Crankshaft                 | Mechanical force    | Rotary engine            |
| Bore                | Cycle                      | Mechanical power    | Single overhead camshaft |
| Bottom dead center  | Cylinder                   | Naturally aspirated | Stroke                   |
| Boxer               | Displacement               | Nonprincipal end    | Supercharger             |
| Cam in block design | Double overhead camshaft   | Oil galleries       | Top dead center          |
| Camshaft            | Exhaust valve              | Overhead valve      | Turbocharger             |
| Combustion          | External combustion engine | Pancake             | Wankel engine            |
| Combustion chamber  | Four stroke cycle          | Piston stroke       |                          |
| Compression ratio   | Intake valve               | Principal end       |                          |
| Connecting rod      | Internal combustion engine | Pushrod engine      |                          |