

## Chapter 27

### Camshafts And Valve Trains

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

<http://jameshalderman.com>

- |                        |                          |                          |                        |
|------------------------|--------------------------|--------------------------|------------------------|
| Aerated                | Finger follower          | Morse type               | Solid valve lifter     |
| Asymmetrical           | Flat link type           | Oil control valve        | Symmetrical            |
| Bucket                 | Freewheeling engine      | Overhead camshaft        | Thrust plate           |
| Cam chucking           | Hydraulic lash adjusters | Overhead valve           | Total indicator runout |
| Cam follower           | Hydraulic valve lifter   | Pump up                  | Valve cam phases       |
| Cam in block           | Interference engine      | Ramp                     | Valve float            |
| Camshaft bearings      | Lobe                     | Roller chain type        | Valve lash             |
| Camshaft duration      | Lobe centers             | Scavenging               | Valve overlap          |
| Composite camshaft     | Lobe lift                | Seat duration            | VTEC                   |
| Double roller chain    | Lobe separation          | Silent chain type        |                        |
| Dual overhead camshaft | Lobe spread              | Single overhead camshaft |                        |