

# Chapter 25

## Cylinder Head And Valve Guide Service

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

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Bend	Fire deck	Spiral bronze alloy bushing
Bronze guide liners	Milling	Squish area
Bronze guides	Oversize stems	Surface grinder
Cam tunnel	Port	Surface to volume ratio
Cast iron guides	Porting	Thin walled guides
Concentric	Quench area	Valve seat inserts
Crossflow head	Root mean square	Valve shrouding
Distortion	Siamese port	Warpage