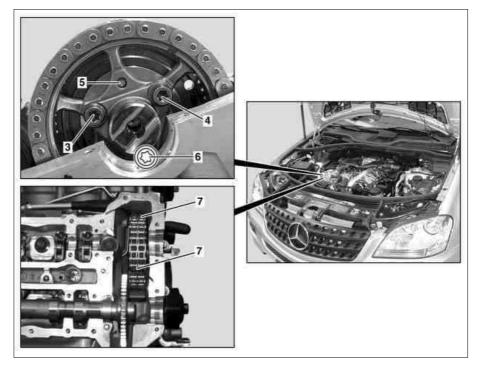
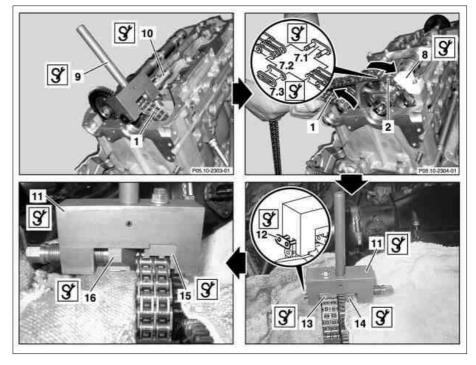
ENGINE 642 in MODEL 164, 251

- 3 Screw
- 4 Bolt
- 5 Locking pin
- 6 Bolt
- 7 Cable tie



P05.10-2350-06

- 1 Old timing chain
- 2 New timing chain
- 7.1 Assembly clip-type fastener
- 7.2 Assembly outer plate
- 7.3 Assembly fuse
- 8 Holddown device
- 9 Chain separating tool
- 10 Thrust spindle
- 11 Rivet press tool
- 12 Centering fork
- 13 Assembly insert (number F5)
- 14 Assembly insert (number D9)
- 15 Assembly insert (number F1)
- 16 Thrust piece (digit D8)



P05.10-2302-06

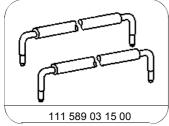
図	Removing		
⚠ Danger!	Risk of injury caused by fingers being pinched or crushed when removing, installing or aligning hoods, doors, trunk lids, tailgates or sliding roof.	Keep body parts and limbs well clear of moving parts.	AS00.00-Z-0011-01A
1.1	Removes spring dome strut	Model 164.8 only Remove spring dome strut at spring dome mounts.	AR62.30-P-2500GY
1.2	Remove partition wall between wheelhouses	Model 251 only	AR62.30-P-2400RT
2	Remove engine trim panel	i Installation: Reinstall the engine cover only after the engine has been checked for oil leaks.	
3	Remove right cylinder head cover		AR01.20-P-5014GZB
4	Fit holddown device kit at the camshafts		*642589003100

In an interest of the markings on the interest of the markings on the interest of the markings on the interest of the whenton damper contains a sprocket smult be aligned with the open of the command at the contains a sprocket of the interest of the inter				
running direction. The makings on the cambal sprockets must be aligned with the children hand. If the TDC marking of the vibration damper make a procket in the part of the firming case cover. Fix old timing chain (1) with a cable te (7) to cambal sprocket in the part of the siming case cover. Fix old timing chain (1) with a cable te (7) to cambal sprocket in the part of the siming case cover. Fix old timing chain (1) with a cable te (7) to cambal sprocket in the part of the siming case cover. Fix old timing chain (1) with a cable te (7) to cambal sprocket in the part of the siming case cover. Fix old timing chain (1) with a cable te (7) to cambal sprocket in the part of the siming case covers with a class cable. Parts, which have fallen in order to avoid damage to the ungine. Fix old timing chain (1) with a cable te (7) to cambal sprocket in the cambal s	5	Unscrew bolt (6) for camshaft sprocket		
Fix old timing chain (1) with a cable tie (7) to camehaft sprocket Remove chain tensioner AR05.10.P.7800G	6	Position piston of cylinder 1 to ignition TDC	running direction. The markings on the camshaft sprockets must lie opposite each other and the markings on the ring gear of the camshaft sprockets must be aligned with the cylinder head. The TDC marking of the vibration damper must be aligned with the bar of the timing	AR05.10-P-6858GZB
Remove chain tensioner Jusicrew bolts (3, 4) from the camshaft sprocket Remove the right intake camshaft 10 Disconnect old timing chain (1) Remove the right intake camshaft 12 Disconnect old timing chain (1) Remove the right intake camshaft 12 Disconnect old timing chain (1) Remove the right intake camshaft 13 Check camshaft sprocket 14 Fit right intake camshaft 15 Fit holddown device kit at the camshafts 16 Screw on camshaft sprocket 17 Screw holddown device kit at the camshafts 18 Drow in new timing chain (2) at the right oylinder head 18 Drow in new timing chain (2) at the right oylinder head 19 Dismount holddown device (8) from new timing chain (2) at right-hand cylinder head 19 Dismount holddown device (8) from new timing chain (2) at right-hand cylinder head 20 Dismount holddown device kit from camshafts 21 Hold-down device kit 22 Remove right intake camshaft 23 Net remove cable tie (7) before cranking the engine. 24 Fit right intake camshaft 25 Fit holddown device (8) from new timing chain (1) connect of timing chain (2) at right-hand cylinder head 26 Fit holddown device (8) from new timing chain (1) to new timing chain (2). Crank engine in direction of rotation at the camshafts 26 Dismount holddown device (8) from new timing chain (1) to new timing chain (2). Crank engine in direction of rotation at the camshaft sprocket 27 Dismount holddown device (8) from new timing chain (1) to new timing chain (2). Crank engine in direction of rotation at the camshaft sprocket 27 Dismount holddown device (8) from new timing chain (1) to new timing chain (2). Crank engine in direction of rotation at the camshaft 28 Dismount holddown device (8) from new timing chain (1) to new timing chain (2). Crank engine in direction of rotation at the camshaft 29 Remove right intake camshaft 20 Dismount holddown device (8) from new timing chain (1) to new timing chain (1) to new timing chain (2). Crank engine in direction of rotation at the camsh	7		0000 00101.	
Unscrew bolts (3, 4) from the camshaft sprocket Service Serv	8	·		AR05.10-P-7800GZB
Dismount the holddown device kit from the camshafts Remove the right intake camshaft		Unscrew bolts (3, 4) from the camshaft		7.11.00.110.1.7.000022
Camshafts Remove the right intake camshaft Remove the right intake camshaft Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess. Must be removed, in order to avoid damage to the engine. Go258909800 Go2589048300 Focusion of the clean cloth. Parts, which have fallen into timing case recess with a clean cloth. Parts, which have fallen into timing case recess. Must be removed, in order to avoid damage to the engine. Go2589048300 Focusion of Go2589044000 Focusion of G	40	·	िर्दे	*0.40500000400
Disconnect old timing chain (1) Case Case Chain separating tool Case Chain separating		camshafts	☐ Hold-down device kit	
clean cloth. Parts, which have fallen into similing case recess, must be removed, in order to avoid damage to the engine. © Case © Chain separating tool © Pressure screw © Chain separating tool © Thrust pins 13 Check camshaft sprocket 14 Fit right intake camshaft 15 Fit holddown device kit at the camshafts 16 Screw on camshaft sprocket 17 Screw holddown device (8) not the new timing chain (2) at the right optimizer head with the outer assembly plate (7.2) and the assembly boding element (7.5) after fitting the otherwise the new timing chain (2). Crank erankset. 17 To grow in the new timing chain (2). Crank engine in direction of rotation at the crankshaft. 18 To pull out dot timing chain (2), crank engine in direction of rotation at the crankshaft. 19 Dismount holddown device (8) from new timing chain (2) timing chain (2), crank engine in direction of rotation at the crankshaft. 19 Dismount holddown device (8) from new timing chain (2) timing chain (2) timing chain (2). Crank engine. 19 Dismount holddown device (8) from new timing chain (2) timing chain (2) timing chain (2). Crank engine. 10 Dismount holddown device (8) from new timing chain (2) timing chain (2				
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damage. Replace if necessary. AR05.20-P-89920				1002589046301
Fit holddown device kit at the camshafts Fit holddown device kit Fit holddown device F	13	Check camshaft sprocket	Check camshaft sprocket for wear or damage. Replace if necessary.	
Screw on camshaft sprocket I Just secure camshaft sprocket with one bold. Similar	14	Fit right intake camshaft		AR05.20-P-6992OM
Screw holddown device (8) onto the new timing chain (2) at the right cylinder head Plant cylinder head P	15	Fit holddown device kit at the camshafts	∀ Hold-down device kit	*642589003100
Screw holddown device (8) onto the new timing chain (2) at the right cylinder head Replace assembly clip-type fastener (7.1), AR05.10-P-7601-C the outer assembly clip-type fastener (7.1), are outer assembly clip-type fastener (7.1), are outer assembly plate (7.2) and the assembly locking element (7.3) after fitting the new timing chain (2) with a rivet link, otherwise the new timing chain (2) could rip when the engine is running, leading to engine damage. If you lout old timing chain (1), connect old timing chain (1), connect old timing chain (1) to new timing chain (2). If Remove cable tie (7) before cranking the engine. Society of the chain (2) at right-hand cylinder head in the cambafts of the cambaft of the engine. Remove right intake cambaft of the cambaft of the engine. Remove right intake cambaft of the engine. Remover the engine the engine. Remover the engine the engine. Remover the engine the	16	Screw on camshaft sprocket	i Just secure camshaft sprocket with one bolt.	
timing chain (2) at the right cylinder head Draw in new timing chain (2) Preplace assembly clip-type fastener (7.1), he outer assembly pate (7.2) and the assembly he outer assembly pate (7.2) and the assembly he outer assembly pate (7.3) after fitting the new timing chain (2) with a rivet link, otherwise the new timing chain (2) could rip when the engine is running, leading to engine damage. If or draw in the new timing chain (2), crank engine in direction of rotation at the crankshaft. If op pull out old timing chain (1), connect old timing chain (1) to new timing chain (2). Remove cable tie (7) before cranking the engine. Assembly links Case Assembly links Holddown device Install Dismount holddown device (8) from new timing chain (2) at right-hand cylinder head Install Dismount holddown device kit from camshafts Fix new timing chain (2) with a cable tie (7) to camshaft sprocket Remove right intake camshaft Rivet new timing chain (2) Remove right intake camshaft Rivet new timing chain (2) AR05.10-P-1601-Case Rivet new timing chain (2) AR05.10-P-1601-Case AR05.10-P-1605-Case AR05.10-P-1605-Case AR05.10-P-1605-Case AR05.2589003800 Case Assembly inserts Thrust piece AC05.2589036300			Nm	*BA05.10-P-1004-01L
Draw in new timing chain (2) Provided in the second of the content of the country of the countr	17		Holddown device	*642589014000
Dismount holddown device (8) from new timing chain (2) at right-hand cylinder head Install	18	Draw in new timing chain (2)	the outer assembly plate (7.2) and the assembly locking element (7.3) after fitting the new timing chain (2) with a rivet link, otherwise the new timing chain (2) could rip when the engine is running, leading to engine damage. i To draw in the new timing chain (2), crank engine in direction of rotation at the crankshaft. i To pull out old timing chain (1), connect old timing chain (1) to new timing chain (2). i Remove cable tie (7) before cranking the engine. Gase Assembly links	*602589009800 *602589024000
Dismount holddown device (8) from new timing chain (2) at right-hand cylinder head Install				*642589014000
timing chain (2) at right-hand cylinder head Install	19	Dismount holddown device (8) from new		
Dismount holddown device kit from camshafts Fix new timing chain (2) with a cable tie (7) to camshaft sprocket Remove right intake camshaft		` '	I I I I I I I I I I I I I I I I I	
Fix new timing chain (2) with a cable tie (7) to camshaft sprocket Remove right intake camshaft Rivet new timing chain (2) Rivet new timing chain (2) Procedure to avoid damage to the engine. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Parts, which have fallen into timing case recess with a clean cloth. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Parts, which have fallen into timing case recess with a clean cloth. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Parts, and a recess of the complex of the compl				
22 Remove right intake camshaft AR05.20-P-6992O 23 Rivet new timing chain (2) © Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. *BA05.10-P-7601-C Image: Property of the engine	20	Dismount holddown device kit from camshafts	Hold-down device kit	*642589003100
Rivet new timing chain (2) Rivet new timing chain (2) Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Read St. 10-P-7601-Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Read St. 10-P-7601-Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess with a clean cloth. Parts, which have fallen into timing case recess with a clean cloth. Parts, which have fallen into timing case recess with a clean cloth. Parts, which have fallen into timing case recess. *BA05.10-P-7601-Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess. *BA05.10-P-7601-Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess. *BA05.10-P-7601-Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess. *BA05.10-P-7601-Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess. *BA05.10-P-7601-Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess. *AR05.10-P-7601-Cover over timing case recess with a clean cloth. Parts, which have fallen into timing case recess. *BA05.10-P-7601-Cover over timing case recess. *AR05.10-P-7601-Cover over timing case recess. *A	21	camshaft sprocket		
Clean cloth. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Mm	22	Remove right intake camshaft		AR05.20-P-6992OM
			clean cloth. Parts, which have fallen into timing case recess, must be removed, in order to avoid damage to the engine. Nm	*BA05.10-P-7601-02PI *BA05.10-P-1005-01L *112589096300 *602589003900 *602589009800 *602589026300
24 Fit right intake camshaft AR05.20-P-69920			[절] Thrust piece	
	24	Fit right intake camshaft		AR05.20-P-6992OM

25	Fit holddown device kit at the camshafts	Y Hold-down device kit	*642589003100
26	Installing chain tensioner		AR05.10-P-7800GZB
27	Crank engine in direction of rotation	Remove cable tie (7) before cranking the engine.	
28	Check timing of engine	Retaining pins Retaining lock	AR05.10-P-6858GZB *111589031500 *112589034000
29	Install the right cylinder head cover		AR01.20-P-5014GZB
⚠ Danger!	Risk of accident caused by vehicle starting off by itself when engine is running. Risk of injury caused by contusions and burns durin starting procedure or when working near the engine as it is running	Secure vehicle to prevent it from moving by itself. g Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
30	Check for leaks with engine running		
31	Reinstall engine cover		
32.1	Install spring dome strut	Model 164.8 only i Install spring dome strut at spring dome mounts.	AR62.30-P-2500GY
32.2	Install partition wall between the wheelhouse	s Model 251 only	AR62.30-P-2400RT

Nm Timing chain, chain tensioner

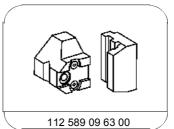
Number	Designation	Engine 642
BA05.10-P-1004-01L	Bolt connecting camshaft sprocket to Ni camshaft	n 18
BA05.10-P-1005-01L	Bolt for timing chain rivet element (reference Ni value)	n 32



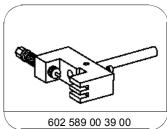




Retaining lock



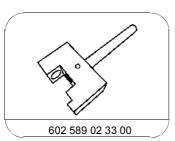
Assembly inserts



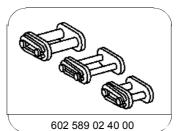
Riveting tool



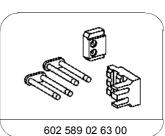
Case



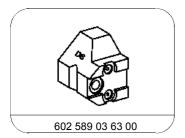
Chain separating tool



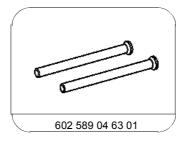
Assembly links

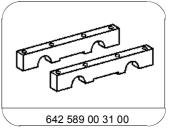


Assembly inserts

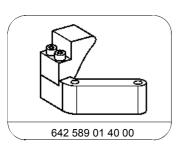








Thrust piece Thrust spindle Thrust pins Holddown device kit



Holddown device