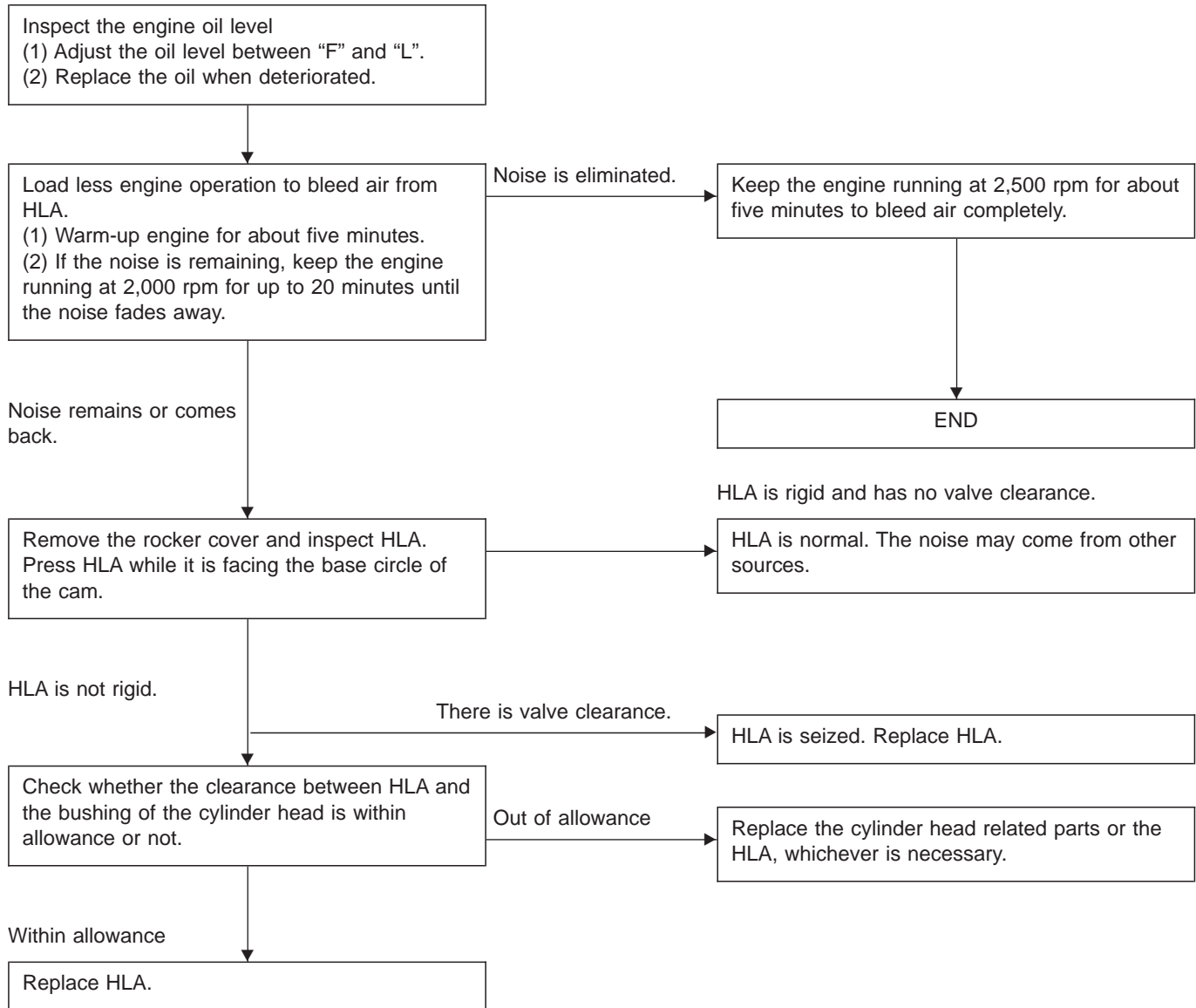


2. Engine Noise

Valve lash adjusters may make clicking noise once engine starts. It is normal if clicking noise ceases after a few minutes.

If clicking noise continues for more than a few minutes, inspect Hydraulic Lash Adjuster (HLA) in accordance with the following flow chart.



If noise still exists, conduct diagnostics procedures in accordance with the following table.

CAUTION:

Do not disconnect spark plug cord while engine is running.

Type of sound	Condition	Possible cause
Regular clicking sound	Sound increases as engine speed increases.	Valve mechanism is defective. <ul style="list-style-type: none"> ● Broken lash adjuster ● Worn camshaft ● Broken valve spring ● Worn valve lifter hole
Heavy and dull clank	Oil pressure is low.	<ul style="list-style-type: none"> ● Worn crankshaft main bearing ● Worn connecting rod bearing (big end)
	Oil pressure is normal.	<ul style="list-style-type: none"> ● Loose flywheel mounting bolts ● Damaged engine mounting
High-pitched clank (Spark knock)	Sound is noticeable when accelerating with an overload.	<ul style="list-style-type: none"> ● Ignition timing advanced ● Accumulation of carbon inside combustion chamber ● Wrong spark plug ● Improper gasoline
Clank when engine speed is medium (1,000 to 2,000 rpm).	Sound is reduced when fuel injector connector of noisy cylinder is disconnected. (NOTE*)	<ul style="list-style-type: none"> ● Worn crankshaft main bearing ● Worn bearing at crankshaft end of connecting rod
Knocking sound when engine is operating under idling speed and engine is warm.	Sound is reduced when fuel injector connector of noisy cylinder is disconnected. (NOTE*)	<ul style="list-style-type: none"> ● Worn cylinder liner and piston ring ● Broken or stuck piston ring ● Worn piston pin and hole at piston end of connecting rod
	Sound is not reduced if each fuel injector connector is disconnected in turn. (NOTE*)	<ul style="list-style-type: none"> ● Unusually worn valve lifter ● Worn cam gear ● Worn camshaft journal bore in crankcase
Squeaky sound	—	<ul style="list-style-type: none"> ● Insufficient generator lubrication
Rubbing sound	—	<ul style="list-style-type: none"> ● Defective generator brush and rotor contact
Gear scream when starting engine	—	<ul style="list-style-type: none"> ● Defective ignition starter switch ● Worn gear and starter pinion
Sound like polishing glass with a dry cloth	—	<ul style="list-style-type: none"> ● Loose drive belt ● Defective engine coolant pump shaft
Hissing sound	—	<ul style="list-style-type: none"> ● Loss of compression ● Air leakage in air intake system, hoses, connections or manifolds
Timing belt noise	—	<ul style="list-style-type: none"> ● Loose timing belt ● Belt contacting case/adjacent part

NOTE*:

When disconnecting fuel injector connector, Malfunction Indicator Light (CHECK ENGINE light) illuminates and trouble code is stored in ECM memory.

Therefore, carry out the CLEAR MEMORY MODE and INSPECTION MODE after connecting fuel injector connector. (Ref. to 2-7 On-Board Diagnostics II System.)