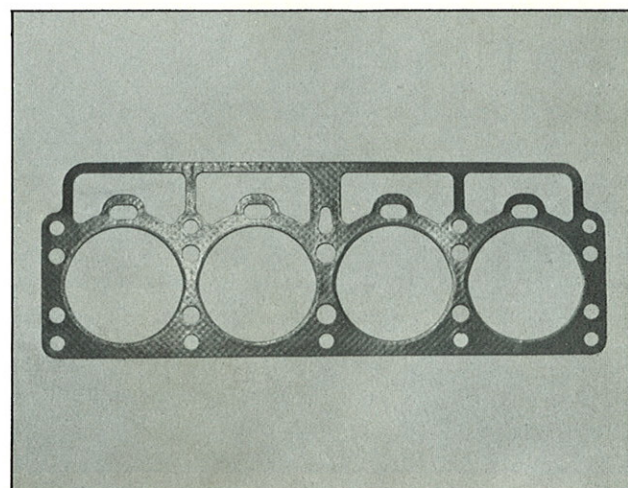
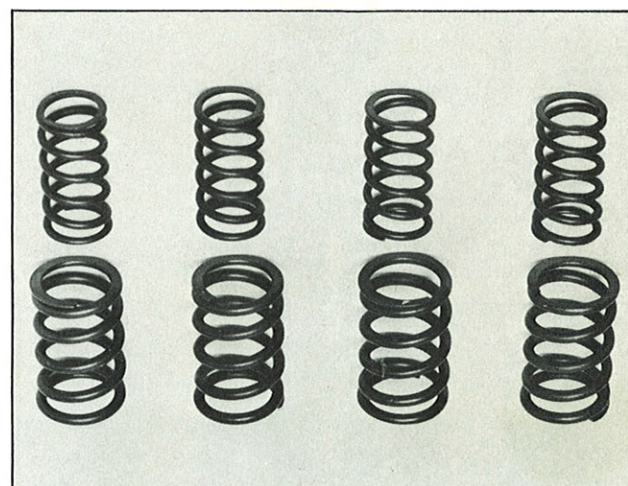
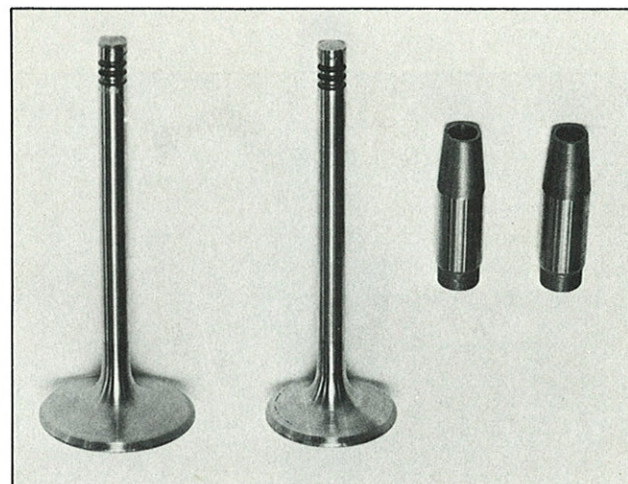


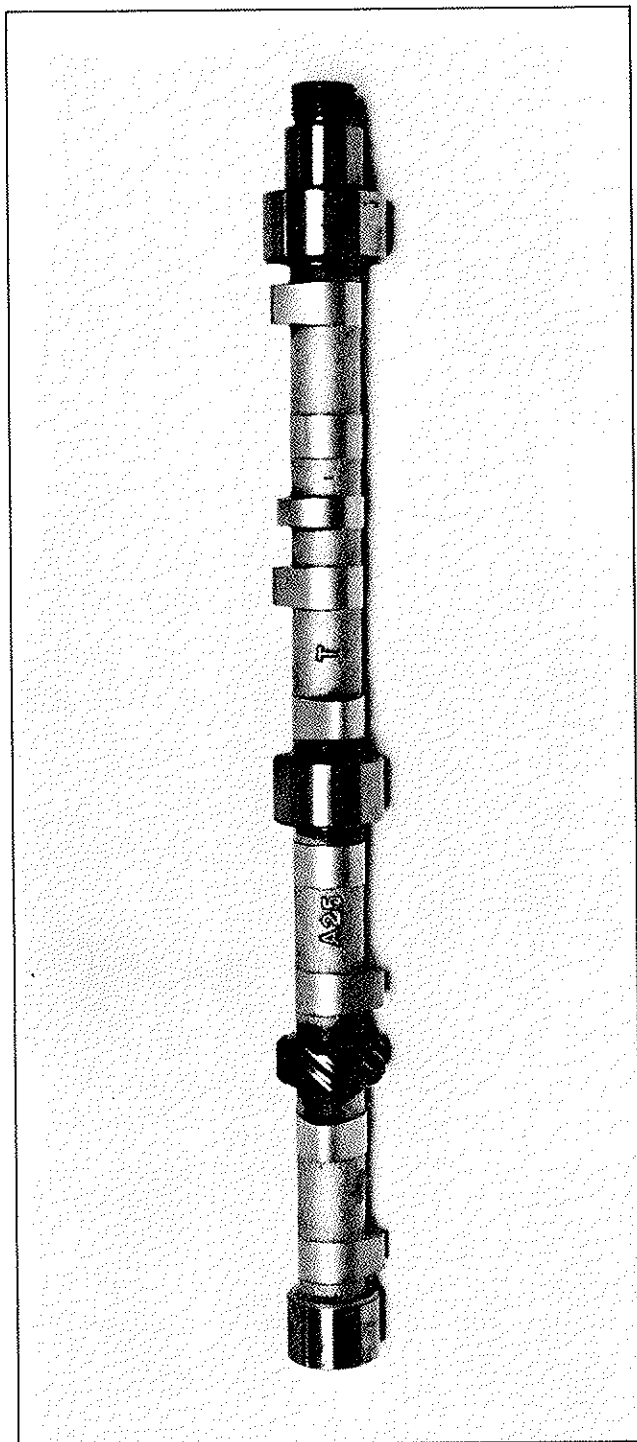
CYLINDER HEAD PARTS

Part No.	Qty.	Description	Specification
419766-1	4	Intake Valve	Std. 44mm as used in 70-75 fuel injection
419735-6	4	Exhaust valve	Std. 35mm as used in 70-75 fuel injection
552834-4	4	Intake Valve	Std. material and shape but size increased to 45mm
552835-1	4	Exhaust Valve	Std. material and shape but size increased to 38mm
552848-4	4	Racing Intake Valve	44mm, lightened, polished, tuliped, made of stainless steel
552849-2	4	Racing Exhaust Valve	35mm, lightened, polished, tuliped made of stainless steel
552823-7	4	Racing Intake Valve	45mm, lightened, polished, tuliped made of stainless steel
552824-5	4	Racing Exhaust Valve	38mm, lightened, polished, tuliped made of stainless steel
552816-1	4	Stage I Intake Valve	44mm, specially shaped and treated stainless steel
552817-9	4	Stage I Exhaust Valve	35mm, specially shaped and treated stainless steel
552813-8	4	Stage III Intake Valve	46mm, specially shaped and treated stainless steel
552815-3	4	Stage III Exhaust Valve	38mm, specially shaped and treated stainless steel
419652-3	4	Std. valve guide for intake	
419653-1	4	Std. valve guide for exhaust	
552828-6	4	Short, cone shaped valve guide for intake to eliminate flow restriction	
552818-7	4	Short valve guide for exhaust to eliminate flow restriction	
418737-3	8	Std. valve spring	
552436-8	8	Special outer valve spring for double spring application. Used on Stage III & IV cylinder head. Provides extra protection against valve drop from spring overload.	
552437-6	8	Special inner valve spring for double spring application. Double springs should be used for engines operating above 6500 RPM.	
460181-1	8	Std. steel valve retainer for std. spring	
552438-4	8	Extra hard aluminum valve retainer to be used in conjunction with double valve springs. Reduces valve train weight	
419702-6	8	Valve seals, std.	
419643-2	16	Valve keepers, std.	
552832-8	1	Adjusting shim kit for std. springs	
552439-2	1	Adjusting shim kit for double valve springs	
824855-1	1	Special high-compression cylinder head gasket for 89mm bore (std.) 1.2mm thickness	
552836-9	1	Special turbopressure head gasket for bore size up to 93mm (2200cc) 1.3mm thickness	



engine B18/B20

CAMSHAFTS AND LIFTERS



All competition camshafts are original castings from our engine foundry in Skovde, Sweden. They are special hardened with a hard chrome process to avoid premature wear from the extreme temperatures and pressures found in competition.

Each particular camshaft profile has been carefully planned with the aid of Volvo Data and many hours of testing in the engine laboratory and race track. These various profiles are unique to Volvo and are designed for optimum/maximum performance when used in conjunction with other Volvo parts under driving conditions described herein.

"K" Camshaft

The original camshaft included in the GT Tuning kit. Similar in design to the std. camshaft used in the B20 fuel injection engine, but with a significant improvement in slow speed torque. Ideal for spirited street driving and heavy loads. Works best with twin carburetors (S.U. or Z.S.) standard fuel injection, or Solex downdraft (GT kit). Meets Swedish exhaust standards, but not certified with EPA.

Valve Lift	Inlet Opens Before TDC	Inlet Closes Before BDC	Exhaust Opens Before BDC	Exhaust Closes Before TDC	Valve Setting	Total Duration
.420 in	27°	70°	70°	27°	.016/.018 in	277°

Part Number 552422-8

"F" Camshaft

The basic camshaft as supplied in the Stage I and Stage II Tuning kits. A compromise design for both highway and competition driving that provides a significant improvement in maximum horsepower with an upward shift of the torque curve. Can be used with all induction systems except electronic fuel injection. Best when matched to rear axle ratios of 4:10 through 4:88. Meets Swedish exhaust emission standards, but not certified with EPA.

Valve Lift	Inlet Opens Before TDC	Inlet Closes Before BDC	Exhaust Opens Before BDC	Exhaust Closes Before TDC	Valve Setting	Total Duration
.440 in	30°	81°	81°	39°	.016/.018 in	300°

Part Number 552460-8

"R" Camshaft

The best all-around camshaft for short twisty race courses or tight performance rally stages. Excellent torque characteristics at 4500 RPM with maximum power developing at 6200 RPM. Not quite as strong in 5200 to 6200 RPM range as "F", but much more tractable below 5000 RPM. Best when used with twin Solex carburetors and 4:88 rear axle ratio, but is useable with all induction systems except single Solex or Electronic fuel injection.

Valve Lift	Inlet Opens Before TDC	Inlet Closes Before BDC	Exhaust Opens Before BDC	Exhaust Closes Before TDC	Valve Setting	Total Duration
.460 in	42°	65°	64°	44°	.016/.018 in	287°

Part Number 552430-1

CAMSHAFTS AND LIFTERS

"S" Camshaft

Strictly a competition profile designed for fast rally stages and medium length race courses. Torque curve is similar to "R" except that maximum RPM is pushed to 7000 RPM for an increase in 10 h.p. over "R". Should be used with twin Solex carburetors fitted with 40mm venturi. Best when coupled to close-ratio gearbox and 4:88 or 5:38 rear axle.

Valve Lift	Inlet Opens Before TDC	Inlet Closes Before BDC	Exhaust Opens Before BDC	Exhaust Closes Before TDC	Valve Setting	Total Duration
.510 in	49°	71°	71°	49°	.020/.020 in	300°

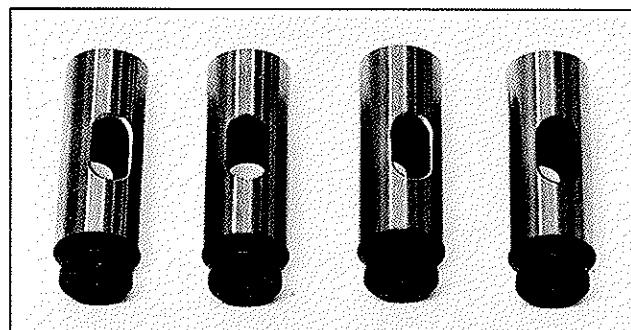
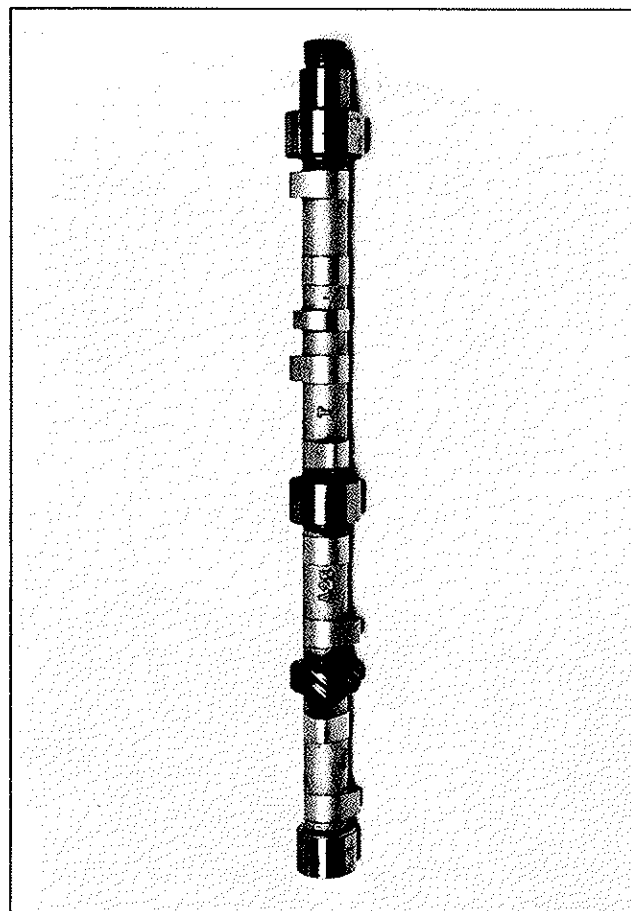
Part Number 552445-9

"U" Camshaft

The "Full Race" camshaft intended for long courses that don't require much mid-range torque. Provides a flatter horsepower curve than "S" in the 6000 to 7000 RPM range. Solex carburetors with 43mm venturi, close-ratio gearbox and 4:88 or 5:38 rear axle ratio are recommended. Note: the fuel injected cast iron exhaust manifold (P.N. 460894-9) coupled with a front pipe modified to extend the separate twin pipes another 4 inches is the best extractor system for both the S and U camshafts.

Valve Lift	Inlet Opens Before TDC	Inlet Closes Before BDC	Exhaust Opens Before BDC	Exhaust Closes Before TDC	Valve Setting	Total Duration
.510 in	54°	78°	78°	54°	.020/.020 in	312°

Part Number 552446-7



Hardened Lifters

Specially hardened and treated lifters to withstand the high temperatures and spring pressures of competition engines. Should be used in conjunction with "K", "F", and "R" camshaft.

Part Number 552466-5

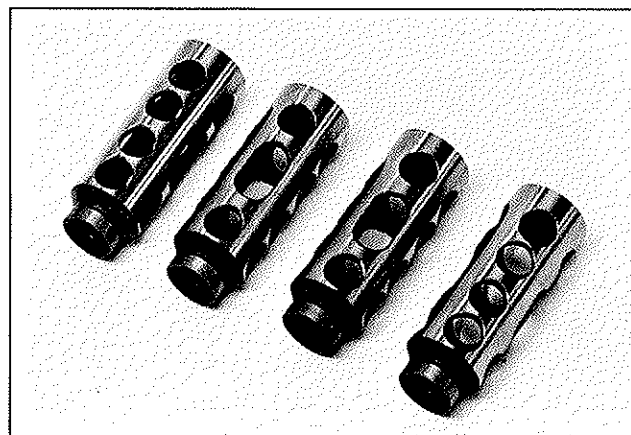
Qty-8

Lightened Lifters

Same as hardened lifter except that each has been precision cross-drilled to reduce weight by nearly half. A must for engines operating above 6000 RPM with "R", "S", or "U" camshaft.

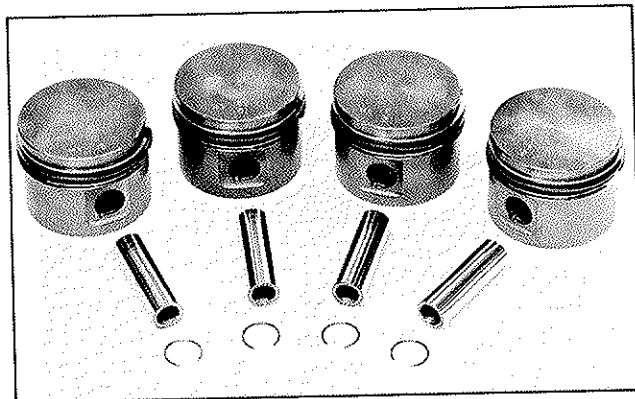
Part Number 552841-9

Qty-8



engine B18/B20

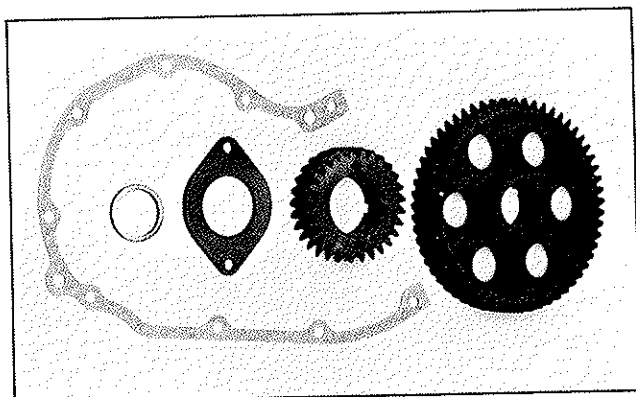
MISCELLANEOUS ENGINE PARTS



Pistons

Forged Mahle aluminum racing pistons are recommended for any engine with high compression (10.5:1 +) used in competition. Superior materials and forging process avoids breakage and deformation caused from detonation as a result of high combustion chamber pressures and temperatures. Each piston is complete with rings, wrist pins, and retaining clips.

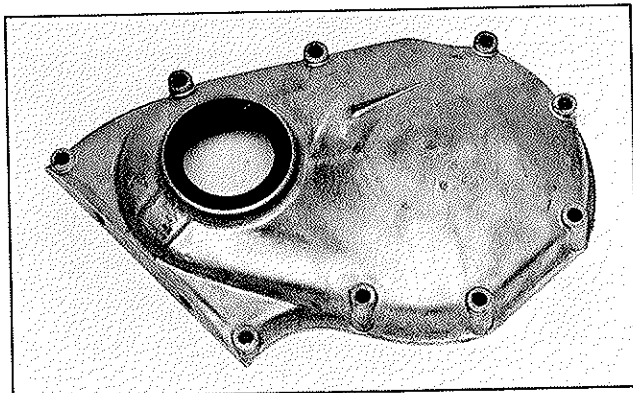
Part No.	Qty.	Description	Specification
552453-3	4	Forged Piston	89mm dia. for 1998cc displacement (B20) 1966-73 B18/B20
552451-7	4	93mm Forged Piston	93mm dia. for 2200cc 1969-73 B20
552450-9	4	93mm Forged Piston	93mm dia. 2200cc but uses large wrist pin for use in 74-75 B20 and all B21



Timing Gears

Hardened steel timing gears to replace the plastic fiber cam gear on production engines. Although generally a little noiser than std. gears, they are highly recommended for engines consistently over 6000 RPM. Kit includes both cam and crankshaft gears along with bolts, washers, and gasket.

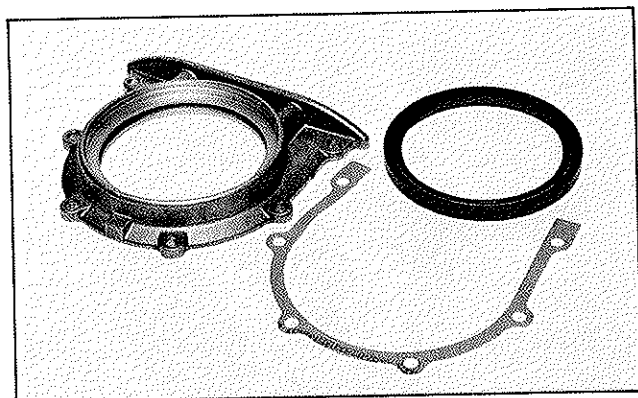
Part No.	Description	Model Application
875375-8	Steel Timing Gear Set	B18/B20



Heavy Duty Timing Gear Cover

Complete cover with heavy duty neoprene rubber seal replaces std. production felt seal. Recommended to control additional oil seepage from high temperatures and crankcase pressure.

Part No.	Description	Model Application
418693-8	Timing Gear Cover	B18/B20



Heavy Duty Rear Crank Seal

New housing and neoprene rubber seal replace std. felt seal used on production B18/B20 engines up to 1973. Eliminates oil from seeping onto clutch lining during high crankcase pressures and temperature.

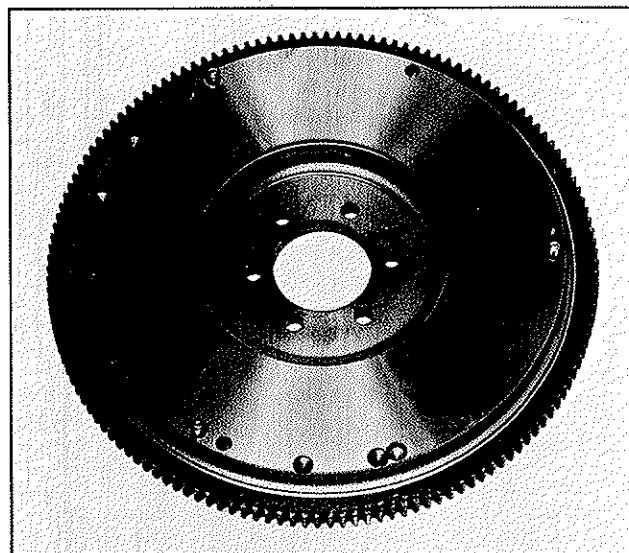
Part No.	Qty.	Description	Model Application
462729-5	1	Seal Housing	1962-73 B18/B20
430118-0	1	Rubber Seal	1962-73 B18/B20
418257-2	1	Gasket	1962-73 B18/B20

MISCELLANEOUS ENGINE PARTS

Lightened Flywheel

Lightened steel flywheel for faster throttle response and quicker, less strenuous gear shifting. Recommended for both street and competition. Saves 6 lbs. over std. flywheel.

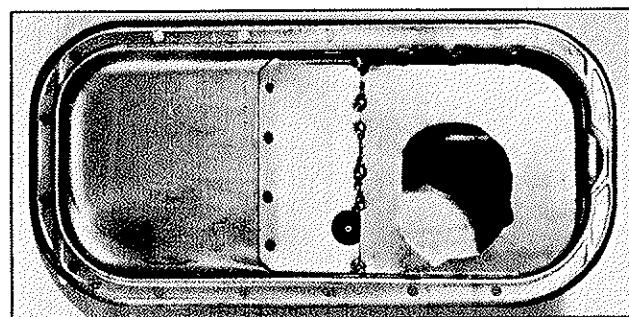
Part No.	Description	Model Application
419392-6	Lightened Flywheel 6 bolts	1962-73 B18/B20 with 6 bolt crankshaft
552833-6	Lightened Flywheel 8 bolts	1974-75 B20, all B21 with 8 bolt crankshaft



Special Oil Pan

Standard oil pan modified with windage type plate to prevent oil from frothing with crankshaft. Also features reinforced oil drain hole.

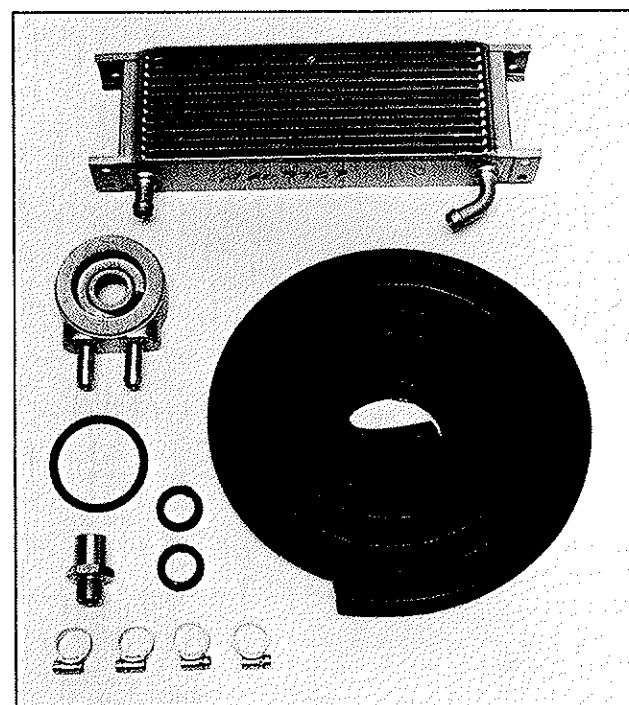
Part No.	Description	Model Application
552847-6	Oil Pan	All B18/B20



Oil Cooler

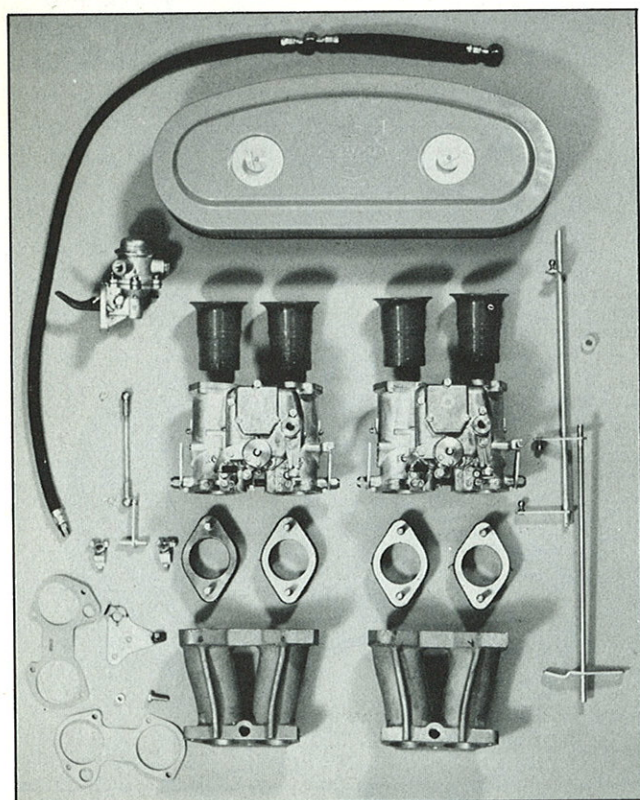
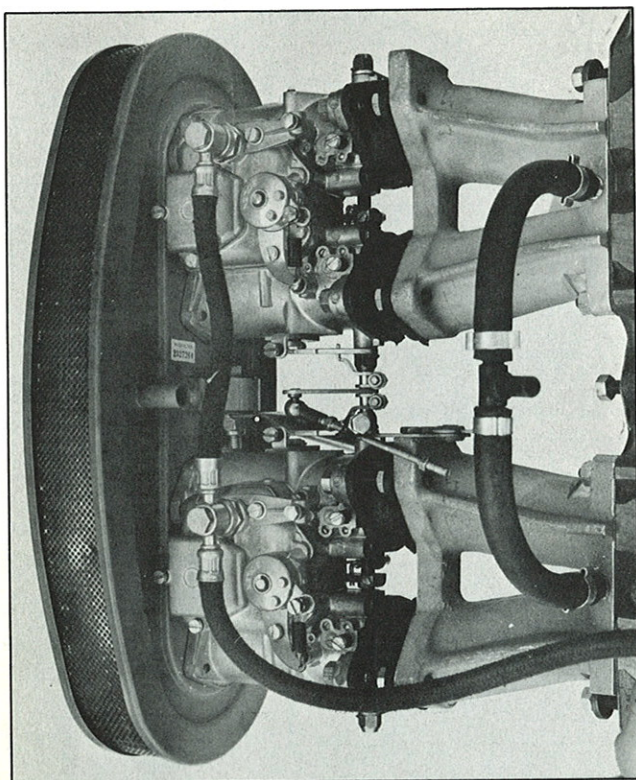
Radiator type oil coolers to prevent overheating of oil from heavy engine loading. A must for any type of competition, but highly recommended for std. engines used under heavy load or operated in high ambient temperatures. Kit includes heat exchanger (radiator), hoses, clamps, aluminum adaptor plate and installation instructions.

Part No.	Description	Model Application
552900-3	13 Tube Oil Cooler	Recommended for normal and heavy duty use.
552910-2	19 Tube Oil Cooler	Recommended for rally and racing.



VOLVO fuel systems

SOLEX SIDE-DRAFT CARBURETOR KIT



The most effective system for extracting the maximum amount of power from the Volvo engine. A complete induction system that includes twin 45mm ADDHE (aluminum) dual choke side-draft Solex carburetors, individual aluminum intake manifolds, special rubber insulator spacers, fuel hose, fuel pump, all throttle linkage, air filter and housing, velocity stacks, engine brace and all necessary nuts, bolts, studs, washers and gaskets for simple installation.

The side-draft Solex induction system is designed to replace the standard induction system used on the production engine, but further engine improvements are recommended. Modifications to the cylinder head, camshaft and exhaust system should be made if the full potential is to be realized. While the short intake manifold and large venturi area are highly desirable for maximum power at full throttle, drivability at low speeds is diminished.

The new generation 45mm ADDHE Solex carburetor replaces the earlier 45mm DDH (part number 552600-9) type that established itself to be such a reliable unit. The new type is further improved by the use of light weight aluminum alloy, throttle spindles mounted in ball bearings to eliminate wear, quick-change main and air jets located on top, and newly designed throttle linkage for easy and lasting synchronization.

The complete kit has been designed for the 140 series but all components are available separately for those who wish to adapt the system to the 120, 1800, or 544 models. Neither the throttle nor the air filter of the 140 kit will fit these earlier models.

A listing of the major components of the Solex carburetor kit is as follows:

Part No.	Qty.	Description
552615-7	1	Complete carburetor kit
419764-6	1	Combination intake/exhaust manifold gasket
419883-4	1	Front intake manifold
419884-2	1	Rear intake manifold
819769-1	8	Manifold to carburetor gasket
824643-1	4	Special Pirelli rubber flange (45mm I.D.) to isolate carburetors from heat and vibration
552630-6	1	Front 45mm Solex (ADDHE) carburetor
552629-8	1	Rear 45mm Solex (ADDHE) carburetor
824708-2	4	Velocity stacks
684036-7	1	Complete air filter and housing
552620-7	1	Air filter insert
831092-2	1	High capacity fuel pump
684899-8	1	Throttle linkage, upper 67-72
552431-9	1	Throttle linkage, upper 73-74
1206551-2	1	Throttle bracket
460047-4	1	Air cleaner support

JET COMBINATION FOR SOLEX ADDHE

Carburetor

Part Numbers: 552629-8 and 552630-6

Stage I & II

Part No.	Qty.	Description	Application
1155040-7	4	36mm choke tube	Std. in carburetor. Good for normal driving with Stage I & II kits.
1155124-9	4	190 main jet	
1155127-2	4	220 air jet	

Stage III & IV

552609-0	4	40mm choke tube	
1155252-8	4	195 main jet	
1155253-6	4	200 air jet	
1155255-1	1	Complete jet set (includes all the above)	Recommended for Stage III & IV

JET COMBINATION FOR SOLEX DDH

Carburetor

Part Number: 552600-9

Stage I & II

Part No.	Qty.	Description	Application
1155040-7	4	36mm choke tube	Std. in Solex DDH. Good for normal driving.
1155024-1	4	185 main jet	
1155038-1	4	175 emulsion tube	

Stage II & III

Part No.	Qty.	Description	Application
552609-0	4	40mm choke tube	
1155104-1	4	150 main jet	
1155105-8	4	120 emulsion tube	
1155115-7	1	Complete jet set (includes all the above)	Recommended for Stage II & III in rally

Stage IV (2200 cc)

Part No.	Qty.	Description	Application
1155121-5	4	43mm choke tube	
1155119-9	4	155 main jet	
1155105-8	4	120 emulsion tube	
1155120-7	1	Complete jet set (includes all the above)	Recommended for Stage III & IV racing

MISCELLANEOUS SOLEX PARTS

For DDH Carburetor

Part No.	Qty.	Description	Application
552604-1	2	Idle jet, 57.5	Std. in Solex DDH
552606-6	2	Idle jet, 62.5	For colder climates
552601-7	1	Gasket kit, both carburetors	
552602-5	1	Complete rebuilding kit for both carburetors. Includes all gaskets, jets, floats and diaphragms for both carburetors.	

Note: A complete listing of all Solex carburetor parts can be found in the Master Volvo R Sport Competition Parts catalog at your authorized Volvo dealer.

fuel systems

