

Connect up the fuel hose. Connect up the vacuum hose and ventilation hose. Connect and install the front section exhaust pipe. Clamp the manifold to the flywheel housing or the gearbox.

Fill up with oil and water.

Start the engine and run it warm.

Adjust the ignition and valve clearances.

Adjust the carburettors using a Synkrotest unit (idling speed 1,000 r.p.m.).

Carry out fine adjustment of the air screws until the engine runs evenly. (Unscrew = richer fuel mixture). Idling CO level max. 4.5%.

Stop the engine. Adjust the flanges on the intermediary shaft so that they influence the levers and open the throttle at the same time.

Adjustment of full throttle stop

Press the accelerator slowly and carefully all the way down. Tighten the screw on the control bracket against the control shaft arm so that the throttle flap does not bottom in the carburettors. This off-loads the throttle shafts from pedal force. Connect up the choke cable. If necessary, fit a longer cable. Screw the cable sleeve to the rear carburettor. Screw the cable to the choke control on both carburettors. Fit the air cleaner and housing.

RUNNING IN

If the tuning kit is being installed on a new engine, then the engine should be driven with a certain amount of care during the first period (up to about 2,000 km = 1,200 miles).

Allow the engine to operate between 2,500 and 5,000 r.p.m. Avoid lugging in high gear. Avoid fast and hard acceleration. Momentary operation at higher engine speed under light loading (for example in down grades or short periods of acceleration up to about 6,000 r.p.m.) are permitted. Keep an eye on the temperature gauge. The temperature must not be too high.

ENGINE OIL

The general Volvo recommendations apply to the lubrication of a tuned engine, that is to say the use of multigrade oil of a well-known make.

TYRES

Vehicles fitted with a tuning kit should also be fitted with braced tread tyres which are approved for speeds of up to 180 km/hour.

Technical data

Output, h.p. at r.p.m. (DIN)	140/6000
Torque, kpm at r.p.m. (DIN)	19.6/4500
Compression ratio	11.0:1
Compression pressure (warm engine)	12-14 kp/cm ²
Camshaft marking	F
Surface treatment	Hard-chromed
Valve timing with valve clearance of 0.45 mm:	Intake opens 39° before TDC " closes 81° after BDC Exhaust opens 81° before BDC " closes 39° after TDC
Duration with valve clearance of 0.45 mm:	Intake 300° Exhaust 300°
Lift on camshaft lobe	7.5 mm
Valve lift (valve clearance = 0)	approx. 11.2 mm
Valve clearances (warm engine)	Intake 0.40 mm Exhaust 0.45 mm
Fuel pressure	0.15-0.25 kp/cm ²
Carburettors (2)	Solex 45 DDH-1
components:	
external venturi	C23352 NR 1
internal venturi	36
main jet	185
air jet	175
idling jet	62.5
starting jet	125
On the upper section of the carburettor flange, the carburettors are marked "-71" or with a symbol in the form of a glove, this signifying that the tuning kit satisfies the demands made on exhaust emission control in accordance with European standards. This is a demand with effect from 1971 models.	
Idling speed	approx. 1000 r.p.m.
Spark plugs	Bosch W 240 T 1
Ignition setting (basic setting)	10 - 12° before TDC
Ignition setting at 5000 r.p.m. (centrifugal governor effect completely eliminated)	37 - 39° before TDC
Cam angle	Standard
Tightening torque, cylinder head bolts	10.5 - 11.0 kpm
Tightening torque, flywheel bolts, part no. 944741	7.5 - 8.0 kpm
Weight of flywheel	8 kg
Exhaust manifold outlet, internal diam.	2"

VOLVO Competition Service	Section 4	No 1
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DESCRIPTION AND TECHNICAL DATA CONCERNING TUNING OF B20 TO STAGE II

The tuning of a B20 engine to Stage II (160 h.p.) is for competition operation and is a further development of the Volvo tuning kit giving 140 h.p. (Stage I).

The tuning consists of:

Modified combustion chambers

The combustion chambers are worked on by hand and polished to a level which provides optimum turbulence and combustion velocity to obtain maximum output. The compression ratio is 11.7:1 which should not be exceeded since this implies a risk of uncontrolled combustion which results in high-speed knocking and burned systems.

Modified ports

The induction and exhaust ports are modified and polished. The induction manifold is polished and adapted to the cylinder head induction ports so that there is no edge which can cause disturbing turbulence at the transition point. These operations increase the volumetric efficiency of the engine.

Valves

The intake and exhaust valves are carefully adjusted by grinding and polished.

Valve springs

In order to obtain maximum spring force on all valves, each valve spring is measured and shims added to provide the correct compressed length.

Compressed length = blocks length of spring + 1 mm clearance + max. valve lift.

Push rods

The shorter push rods from the B30 engine are to be used.

Tappets (valve lifters)

The tappets (valve lifters) have their weight reduced, about 30 g/each.

Camshaft

Type R, hard-chromed. NOTE. For reasons of material strength, this camshaft is to be used together with tappets (valve lifters) part no. 552841.

Clutch

"Laplander" type.

Flywheel

The flywheel is made of aluminium alloy and weighs 3.5 kg. It is fitted by using the bolt with part no. 944741 and the washer, part no. 942336.

Main bearing seal

A rubber packing box is used as a rear main bearing seal and this replaces the felt seal.

Balancing

The crank shaft, flywheel and clutch are balanced together as one integral unit.

Cylinder head gasket

The protective edges round the cylinders are reinforced. The protective plate is double-folded on one side.

Spark plugs

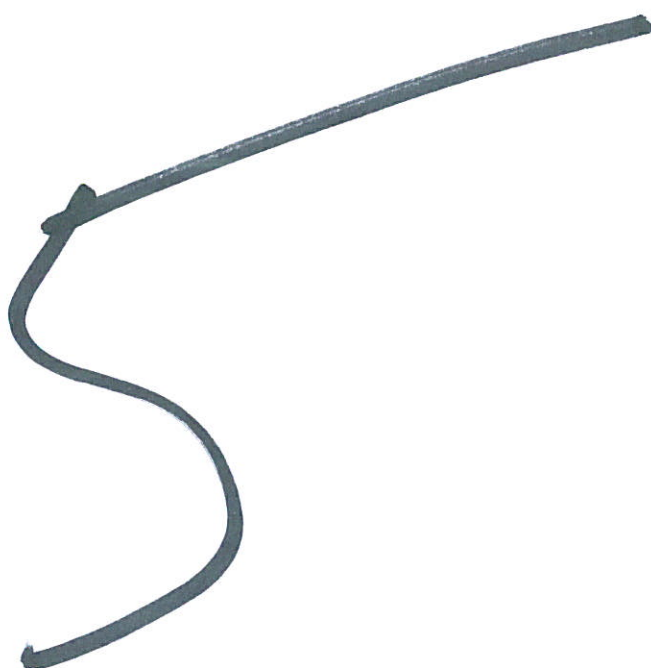
Bosch W 280 T 13 S. A lower heat range than 280 should not be used.

Camshaft gear

A steel camshaft gear is to be fitted in competition engines.

Technical data

Output, h.p. at r.p.m. (DIN)	160/6200
Torque, kpm at r.p.m. (DIN)	20.6/4700
Compression ratio	11.7:1
Camshaft marking	R
Surface treatment	hard-chromed
Valve timing at valve clearance of 0.45 mm:	Intake opens 43° before TDC
	" closes 64° after BDC
	Exhaust opens 65° before BDC
	" closes 42° after TDC
Duration with valve clearance of 0.45 mm:	Intake 287°
	Exhaust 287°
Lift on camshaft lobe	7.6 mm
Valve lift (valve clearance = 0)	11.4 mm
Recommended valve clearances (warm engine)	Intake 0.25 mm
	Exhaust 0.25 mm
Valve disc diameter	Intake 44 mm
	Exhaust 35 mm
Carburettors	Solex 45 DDH-1



VOLVO



Competition Service

1955 190th STREET
TORRANCE, CA 90509

(213) 770-1550

DISTRIBUTION

Price List

DATE

January
1974

Part No.	Description	Retail	Notes
10591-6	Nut		B-18, B-20 Tuning Kit
16218-0	Angle Coupling Oil Pressure Sender		Instrument Panel
71816-3	Vacuum Plunger Spring		B-18 Tuning Kit
181330-2	Needle Bearing		Needle Bearing Trans. Conversion
181331-0	Needle Bearing		
191701-2	Nut, Oil Cooler		B-20 Tuning Kit
237248-0	Metering Needle		B-18 Tuning Kit
237435-3	Carburetor	104.76	Solex 45 DDH
238624-1	Spark Plug		Bosch W240 T1
240571-0	Spark Plug		Bosch W280 T13S
241086-8	Ignition Coil		B-18, B-20 Tuning Kit
241612-1	Resister		B-18, B-20 Tuning Kit
254670-3	Close Ratio Trans.	686.19	w/Remote Control
272530-7	Front Brake Pad Kit		140, 164 ATE
272531-5	Rear Brake Pad Kit		140, 164 ATE
272534-9	Front Brake Pad Kit		140, 164 Girling
272535-6	Rear Brake Pad Kit		140, 164 Girling
275894-4	Front Brake Pad Kit (Special)		140, 164 Girling and 130 Ch 312500-
275895-1	Rear Brake Pad Kit (Special)		140, 164 Girling
277751-4	Halogen Bulb, 55 W		

Part No.	Description	Retail	Notes
380217-0	1st Speed Gear		Needle Bearing Trans. Conversion
380218-8	2nd Speed Gear		Needle Bearing Trans. Conversion
380305-3	Speedo Drive Gear, Sm.		x 254670/4:88:1 Axle Conversion
380382-2	Input Shaft, M-40	136.19	Close Ratio Trans. Conversion-70
380422-6	Gear Cluster M-40	144.05	Close Ratio Trans. Conversion-70
380423-4	3rd Speed Gar M-40	45.00	Close Ratio Trans. Conversion-70
380569-4	Throw-out Bearing		Stage II, to be used w/418930
380789-8	Speedo, Output Shaft Gear, Large	23.14	x 254670 4:88:1 Axle Conversion
380824-3	Gear Cluster	154.52	Close Ratio Trans. Conversion-70
384479-2	Limited Slip Differential M-30		130
384498-2	Limited Slip Differential M-30		140, 67-69
384727-4	Limited Slip Differential M-30		140, 70-
403315-5	Valve Lock		B-18 Tuning Kit
403390-8	Exhaust Valve Guide		B-18 Tuning Kit
403500-2	Valve Spring Washer		B-18 Tuning Kit
405357-5	Valve Spring Ring		B-18 Tuning Kit
418260-6	Special Oil Pan	Replaced by 552847-6	
418264-8	Belt Pulley Hub		B-18, B-20 Tuning Kit
418423-0	Valve Lifter		B-20 Tuning Kit (Replaces 552844)
418433-9	Oil Cooler	83.28	B-20 Tuning Kit
418445-3	Water Pipe Gasket		B-20 Tuning Kit

Part No.	Description	Retail	Notes
418601-1	Nipple		B-20 Tuning Kit
418651-6	Water Pipe		B-20 Tuning Kit
418668-0	Seal, Timing Gear Cover		B-18, B-20 Tuning Kit
418693-8	Timing Gear Cover w/Seal		B-18, B-20 Tuning Kit
418737-3	Valve Spring		B-18, B-20 Tuning Kit
418871-0	Clutch Disc		B-20 Tuning Kit Stage II
418930-4	Clutch Pressure Plate	47.10	B-20 Tuning Kit Stage II
419258-9	Camshaft D Replaced by 460487-2		B-18 Tuning Kit
419315-7	Intake Valve		B-18 Tuning Kit
419316-5	Exhaust Valve	11.41	B-18 Tuning Kit
419378-5	Intake Valve Guide	5.79	B-18 Tuning Kit
419381-9	Exhaust Manifold	72.00	B-18, B-20 Tuning Kit
419392-6	Flywheel Complete	99.00	B-18, B-20 Tuning Kit
419393-4	Headgasket	9.32	B-18 Tuning Kit
419395-9	Oil Pump Cover	7.71	B-18 Tuning Kit
419643-2	Valve Spring Ring		B-20 Tuning Kit
419644-0	Valve Spring Washer		B-20 Tuning Kit
419652-3	Intake Valve Guide		B-20 Tuning Kit
419653-1	Exhaust Valve Guide		B-20 Tuning Kit
419658-0	Headgasket	9.64	B-18 Tuning Kit .040 Overbore
419702-6	Valve Seal		B-20 Tuning Kit
419735-6	Exhaust Valve		B-20 Tuning Kit
419763-8	Headgasket		B-20 Tuning Kit 0.8mm
419764-6	Exhaust Manifold Gasket		B-20 Tuning Kit

Part No.	Description	Retail	Notes
419766-1	Intake Valve		B-20 Tuning Kit
419882-6	Stage I Cylinder Head	222.62	B-20 Tuning Kit
419883-4	Intake Manifold Front	32.14	B-20 Tuning Kit
419884-2	Intake Manifold Rear	32.14	B-20 Tuning Kit
419906-3	Air Cleaner Gasket	.39	B-20 Tuning Kit
422635-3	Intake Manifold Plug	.22	B-20 Tuning Kit
460033-4	Engine Support		1800
460039-1	Throttle Control Bracket	4.05	B-20 Tuning Kit x 552611
460047-4	Air Cleaner Retainer	4.63	B-20 Tuning Kit
460464-1	Water Inlet Pipe		B-20 Tuning Kit
460509-3	Camshaft F	102.14	B-20 Tuning Kit Stage I
460783-3	Reinforced Crakshaft Pully		B-20
460814-7	Camshaft R	123.10	B-20 Tuning Kit Stage II Replaces 460911
460911-1	Camshaft		Replaced by 460814
500984-0	Gear Set 4:88:1	161.85	M27
525060-0	Front Progressive Spring	29.57	130
525061-8	Rear Progessive Spring	27.00	130
525880-1	Gear Set 4:88:1	165.00	M30
538445-8	Limited Slip Rear Complete	366.67	M30 67-69 4:88:1
552026-7	Bosch 180 Knick Light	36.00	
552030-9	Halogen Bulb 100 W	18.00	
552031-7	Adjusting Stay for 552026		
552101-8	Front Shock Absorber	45.00	130
552102-6	Rear Shock Absorber	51.00	130

Part No.	Description	Retail	Notes
552105-9	Front Progressive Spring	33.00	140
552106-7	Front Progressive Spring Harder	36.00	140
552111-7	Front Skid Plate Aluminum	298.57	130 39.65 lbs.
552112-5	Rear Skid Plate Aluminum	120.48	130 24.23 lbs.
552113-3	Front Skid Plate Aluminum	150.00	140 67-70 44.06 lbs.
552114-1	Rear Skid Plate Aluminum	144.05	140 17.62 lbs.
552116-6	Front Skid Plate Aluminum	150.00	140 70- 44.06 lbs.
552120-8	Safari Suspension Kit		No longer available
552121-6	x Side Member, Front, Left	54.00	x
552122-4	x Side Member, Front, Right	54.00	x
552123-2	x Side Member, Rear, Left	45.00	x
552124-0	x Side Member, Rear, Right	45.00	x 552120
552125-7	x Inner Wheel Housing Rear, Left	48.00	x 552120
552126-5	x Inner Wheel Housing Rear, Right	48.00	x 552120
552127-3	x Reinforcement Plate Anchor	7.07	x Upper Rear Shock Mount
552130-7	Front Axle Cross Member	209.52	140, 164
552131-5	Lower Wishbone, Left	57.07	140, 164
552132-3	Lower Wishbone, Right	57.07	140, 164
552135-6	Front Progressive Spring	42.00	164
552136-4	Rear Progressive Spring	34.20	x 552137 140, 164
552137-2	Rear Spring Package	46.20	140, 164 (01 st each side)
			x - Contained in Kit #

Part No.	Description	Retail	Notes
552138-0	Rear Support Arm	51.00	140, 164 67-70
552139-8	Rear Support Arm	51.00	140, 164 70-
552140-6	Harder Rubber Bushing Support Arm	25.71	
552141-4	Lower Shock Absorber Bolt	19.28	
552142-2	Reinforcement Plate for Support Arm Journalling	7.71	
552151-3	Lower Washer	5.01	x 552137
552152-1	Upper Washer	1.92	x 552137
552156-2	Rear Engine Cross Member	28.93	
552158-8	Intermediate Bearing Suspension	16.07	Fits transmission
552170-3	Front Sway Bar 18mm	Replaced by 552171-1	
552171-1	Front Sway Bar 18mm	54.00	140 70-
552172-9	Front Sway Bar 20mm	57.60	140 70-
552173-7	Rubber Bushing	4.63	Required w/ 552172
552180-2	Safari Suspension Kit	251.43	140 70-
552181-0	x Side Member Rear, Left	48.60	
552182-8	x Side Member Rear, Right	48.60	
552183-6	x Inner Wheel Housing Rear, Left	52.20	
552184-4	x Inner Wheel Housing Rear, Right	52.20	
552191-9	Front Shock Absorber	27.00	de Carbon 140, 164
552192-7	Rear Shock Absorber	28.93	de Carbon 140, 164
552208-1	x Exhaust Clamp w/Bolt	2.09	x 552211
552211-5	Rallye Exhaust System Complete	51.00	
552212-3	x Pipe Over Rear Axle	33.00	
552213-1	x Tail Pipe	9.64	

x - Contained in Kit #

Part No.	Description	Retail	Notes
552214-9	x Bracket w/Clamp	6.43	
552221-4	Tank Spacer Frame	48.00	
552301-4	Dished Drivers Seat	83.81	
552303-0	x Seat Base	64.34	
552304-8	Spare Tire Retainer	33.00	
552305-5	RECARO Drivers Seat	193.80	140 Only
552501-9	Front Brake Pad Kit	28.93	130 - Ch 312499
552551-3	T-Union for Crankcase Vent.	3.86	B-20 Tuning Kit
552601-7	Carb. Gasket/Packing Kit Complete	10.93	Solex (02)
552602-5	Carb. Reconditioning Kit	65.46	Solex (02)
552604-1	Jet-Idle Nozzle 57.5	1.60	
552605-8	Jet-Idle Nozzle 60.0	1.60	
552606-6	Jet-Idle Nozzle 62.5	1.60	
552607-4	Jet-Idle Nozzle 65.0	1.60	
552610-8	Carburetor Kit Complete	466.19	140 B-20
552611-6	Control Kit/Linkage for Carb.	21.21	Solex Dual -72
552620-7	Air Cleaner Element	22.50	
552621-5	Air Cleaner Nut	2.73	
552622-3	Air Cleaner Washer	1.12	
552703-1	Instrument Panel	130.95	140 67-70
552704-9	Instrument Panel	144.04	164 67-70
552705-6	x Tachometer	61.55	140
552706-4	x Tachometer	61.55	164
			x - Contained in Kit #

Part No.	Description	Retail	Notes
552708-0	x Temp. Guage	23.14	Replaced by # 552709-8
552709-8	x Fuel Guage	23.14	B-20
552711-4	x Rheostat	11.57	(Panel Lighting)
552712-2	x Tank Level Unit	19.28	Stage II
552713-0	x Temp. Guage Sender	7.71	Stage II
552714-8	x Oil Pressure Guage & Warning Light Sending Unit	23.14	
552715-5	x Speedometer	39.00	
552716-3	x Tank Level Unit	19.28	71 - 72
552717-1	x Oil Pressure Guage	21.21	
552718-9	x Speedometer Not available in miles	4:88:1 R/A Ratio	
552723-9	Instrument Panel	130.95	140 71 - 72
552724-7	Instrument Panel	144.04	164 71 - 72
552725-4	x Warning Light Parking, Brakes	3.21	67 - 72
552726-2	x High Beam Light	3.21	67 - 72
552727-0	x Alternator Light	3.21	67 - 72
552728-8	x Oil Pressure Warning Light	3.21	67 - 72
552729-6	x Turn Indicator Light	3.21	67 - 72
552730-4	x Over-Drive Indicator Light	3.21	67 - 72
552732-0	Instrument Panel	Not available in miles	140 67 - 70 4:88:1 R/A Ratio
552734-6	Instrument Panel	Not available in miles	140 71-72 4:88:1 R/A Ratio
552840-6	Aluminum Flywheel	275.00	7.71 lbs.
552841-9	Lightened Valve Lifter	11.57	B-20 Tuning Kit Stage II
552842-7	Cylinder Head	561.00	B-20 Tuning Kit Stage II
			x - Contained in Kit #

Part No.	Description	Retail	Notes
950354-1	Nut		
950586-8	Cylinder Stud		
951789-7	Radiator Hose Clamp		
952069-3	Plug, Oil Cooler		B-20 Tuning Kit
952075-0	Plug, Intake Manifold		
953032-0	Stud Bolt		x 552611
953461-1	Stud Bolt	.19	
955512-9	Screw, Water Pump		
955536-8	Screw		
955780-2	Nut		x 552611
955826-3	Nut		Carb. Linkage
955847-9	Nut		Carb. Linkage
957173-8	Gasket, Banjo Screw		Fuel Line
959088-6	Ball Socket		x 552611 Throttle Linkage
960142-8	Washer, Air Cleaner Screw		
6000116-1	Main Jet	1.54	Solex Repair Parts
6000117-9	Main Jet	1.54	Solex Repair Parts Marine Engine
6000350-6	Starter Jet	.96	Solex Repair Parts
6010134-2	Emulsion Tube Carrier Assembly	3.47	Solex Repair Parts
6010136-7	Carrier Assembly Emulsion Tube	3.47	Solex Repair Parts Marine Engine
6020029-2	Injector Pump Assy.	1.92	Solex Repair Parts
6030038-1	Valve, Complete	3.47	Solex Repair Parts
6100035-2	Throttle Butterfly	3.69	Solex Repair Parts
			x - Contained in Kit #

Part No.	Description	Retail	Notes
6550005-0	Diaphragm Complete	5.59	Solex Repair Parts
6600154-6	Pump Intermediate Actuating Lever	1.54	Solex Repair Parts
6600188-4	Spring Lever	.96	Solex Repair Parts
6600189-2	Throttle Control Lever	1.92	Solex Repair Parts
6601190-0	Throttle Control Lever	1.92	Solex Repair Parts
6620037-9	Pump Control Rod	1.92	Solex Repair Parts
6630083-1	Throttle Spindle w/Lever	10.92	Solex Repair Parts
6700035-6	Cable Fixing Screw	.38	Solex Repair Parts
6700038-0	Slow Running Adjust. Screw	.57	Solex Repair Parts
6700046-3	Volume Control Screw	.57	Solex Repair Parts
6700059-6	Bracket Fising Screw	.38	Solex Repair Parts
6700067-0	Choke Tube Screw	.57	Solex Repair Parts
6700077-8	Pump Assembly Fixing Screw	.22	Solex Repair Parts
6700080-2	Float Chamber Assy. Screw (Short)	.57	Solex Repair Parts
6700083-6	Air Cap Fixing Screw	.38	Solex Repair Parts
6700116-4	Screw, Pump Lever	.57	Solex Repair Parts
6700118-0	Pump Cover Fixing Screw	.22	Solex Repair Parts
6700138-8	Central Diffusor Screw	.57	Solex Repair Parts
6700155-2	Floatchamber Assy. Screw (Long)	.96	Solex Repair Parts
6700156-0	Throttle Stop Screw	.57	Solex Repair Parts
6700161-0	Roller Bracket w/Screw Assembly	.96	Solex Repair Parts
6700179-2	Throttle Fixing Screw	.22	Solex Repair Parts
6700180-0	Tulip Fixing Screw	.77	Solex Repair Parts
6710005-7	Throttle Lever Nut	.55	Solex Repair Parts
6710011-5	Nut	.22	Solex Repair Parts
6710015-6	Nut	.22	Solex Repair Parts

Part No.	Description	Retail	Notes
6710019-8	Adjusting Nut, Pump Control Rod	.38	Solex Repair Parts
6720002-2	Screw Spring	.22	Solex Repair Parts
6720007-1	Starter Valve Spring	.57	Solex Repair Parts
6720062-6	Pump Control Rod Spring	.57	Solex Repair Parts
6720063-4	Diaphragm Center Spring	.38	Solex Repair Parts
6720080-8	Throttle Spindle Return Spring	.96	Solex Repair Parts
6730035-0	Circlip	.22	Solex Repair Parts
6730038-4	Stop Washer	.77	Solex Repair Parts
6730047-5	Control Rod Retaining Washer	.38	Solex Repair Parts
6735011-6	Bushing (Teflon)	2.31	Solex Repair Parts
6740250-3	Needle Valve Seat	12.72	Solex Repair Parts
6740271-9	Grub	.38	Solex Repair Parts
6750008-2	Float Toggle Spindle	.57	Solex Repair Parts
6760003-1	Ball	.22	Solex Repair Parts
6760516-2	Pump	.57	Solex Repair Parts
6760517-0	Grub w/Sealing Ring	.57	Solex Repair Parts

VOLVO CLOTHING

Rally Jacket - Blue (Winter)	31.41	Size 6 yrs. to 16 yrs.
Rally Jacket - Blue (Winter)	39.27	Extra Small to Extra Extra Large
Summer Jacket - Blue	19.90	All Sizes
Sweat Shirt - Yellow	10.47	All Sizes
Sweat Whirt - White	10.47	All Sizes
T Shirt - White	4.71	All Sizes
T Shirt - Yellow	4.71	All Sizes
T Shirt - Blue	4.71	All Sizes

VOLVO**Competition Service**

Part No.	Description	Retail	Dealer Net	Dis- count	Notes
552093-7	Shock Absorber Front	29.92		C	444/544
552094-5	Shock Absorber Rear	33.92		C	444/544
552101-8	Shock Absorber Front	27.93		C	120/130/1800
552102-6	Shock Absorber Resr	31.42		C	120/130/1800
552095-2	Shock Absorber Front	29.92		C	142/144/145 1966 to present
552096-0	Shock Absorber Rear with Lower Bushing	33.92		C	142/144/145 1966 to 9/71
552097-6	Shock Absorber Rear without Lower Bushing	33.92		C	142/144/145 10/71 to present
552098-6	Shock Absorber Front	29.92		C	164 All
552099-4	Shock Absorber Rear with Lower Bushing	33.92		C	164 1969 to 9/71
552100-0	Shock Absorber Rear without Lower Bushing	33.92		C	164 10/71 to present
552103-4	Rally Sweden Shock Front	29.92		C	140/160 Extra Firm
552104-2	Rally Sweden Shock Rear with Lower Bushing	33.92		C	140/160 Extra Firm 1966 to 9/71
552092-9	Rally Sweden Shock Rear without Lower Bushing	33.92		C	140/160 Extra Firm 10/71 to present



Part No.	Description	Retail	Dealer Net	Dis- count	Notes
241529-7	Distributor Stage II	51.09		C	B18/B20
552020-0	160mm Foglight	19.95		D	Hella Clear Lens
552021-8	160mm Spotlight	19.95		D	Hella Clear Lens
552022-6	170mm Foglight	25.20		D	Hella Clear Lens
552023-4	170mm Spotlight	25.20		D	Hella Clear Lens
552024-2	192mm Foglight	32.92		D	Hella Clear Lens
552025-9	192mm Spotlight	32.92		D	Hella Clear Lens
552028-3	Large Lamp Cover	1.40		D	With Emblem
552029-1	Medium Lamp Cover	1.40		D	With Emblem
552032-5	Auxiliary Light Wiring Kit	7.14		D	Includes Harness, Relay, Terminals, Switch
552308-9	Safari Jerrican	10.63		D	5 Gallon Capacity
552309-7	Filler Hose	3.20		D	Use with 552308-9
552907-8	G.T. Identification Kit	2.33		D	140 Series
552908-6	G.T. Identification Kit	9.03		D	140 Series
552909-4	G.T. Identification Kit	9.03		D	140 Series
552910-2	G.T. Bumper Strip	5.53		D	73 140/160 Front and Rear
552911-0	G.T. Bumper Strip	5.53		D	74 140/160 Front and Rear
552912-8	Grille Light Kit	95.65		A	66-70 Foglight
552913-6	Grille Light Kit	95.65		A	66-70 Spotlight
552914-4	Grille Light Kit	93.23		B	71-72 Foglight
552915-1	Grille Light Kit	93.23		B	71-72 Spotlight

6

VOLVO

*Competition
Service*

PROD PV 444/544
120/130/140/160/
1800
Bilstein Gas Shock
Absorbers

SECTION

2

NO.

8

DATE

April, 1974

Ant Qty	Det nr Part No	Benämning Description	Model Model
2	552093-7	Shock Absorber Front	444/544
2	552094-5	Shock Absorber Rear	444/544
2	552101-8	Shock Absorber Front	120/130/1800
2	552102-6	Shock Absorber Rear	120/130/1800
2	552095-2	Shock Absorber Front	142/144/145 1966 to present
2	552096-0	Shock Absorber Rear with Lower Bushing	142/144/145 1966 to 9/71
2	552097-6	Shock Absorber Rear without Lower Bushing	142/144/145 10/71 to present
2	552098-6	Shock Absorber Front	164 All
2	552099-4	Shock Absorber Rear with Lower Bushing	164 1969 to 9/71
2	552100-0	Shock Absorber Rear without Lower Bushing	164 10/71 to present
2	552103-4	Rally Sweden Shock Front	140/160 Extra Firm
2	552104-2	Rally Sweden Shock Rear with Lower Bushing	140/160 Extra Firm 1966 to 9/71
2	552092-9	Rally Sweden Shock Rear without Lower Bushing	140/160 Extra Firm 10/71 to present

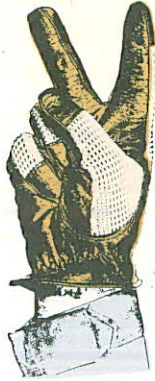
VOLVO

*Competition
Service*

PROD	SECTION
120/130/140/160	2
1800	NO.
El-Utrustning	12:3
Electrical Equipmt.	
DATE	
April 1974	

Pos	Ant Qty	Det nr Part No	Benämning	Description
	1	552020-0	Kurvstralkastare Hella 160mm utan glodlampa	Foglight, Hella 160mm without bulb
	1	552021-8	Fjarrstralkastare, Hella 160mm utan glodlampa	Spotlight, Hella 180mm without bulb
	1	552022-6	Kurvstralkastare Hella 170mm utan glodlampa	Foglight Hella 170mm without bulb
	1	552023-4	Fjarrstralkastare, Hella 170mm utan glodlampa	Spotlight, Hella 170mm without bulb
	1	552024-2	Kurvstralkastare, Hella 192mm utan glodlampa	Foglight, Hella 192mm without bulb
	1	552025-9	Fjarrstralkastare, Hella 192mm utan glodlampa	Spotlight, Hella 192mm without bulb
	1	552028-3	Stenskydd for extraljus (med Volvo emblem)	Protective lamp cover with Volvo emblem 160 to 170mm
	1	552029-1	Stenskydd for extraljus (med Volvo emblem)	Protective lamp cover with Volvo emblem 140 to 160mm
	1	552032-5	Kabelharva for alla extraljus inklusive rela, kableskor, kontakter och instrucktion.	Wiring kit for all auxiliary lights. Includes harness, relay, terminals, switch and instructions.

VOLVO



Competition Service

1955 190th STREET
TORRANCE, CA 90509

(213) 770-1550

DISTRIBUTION

All holders of Volvo Competition
Service Binder - U.S.A.

DATE

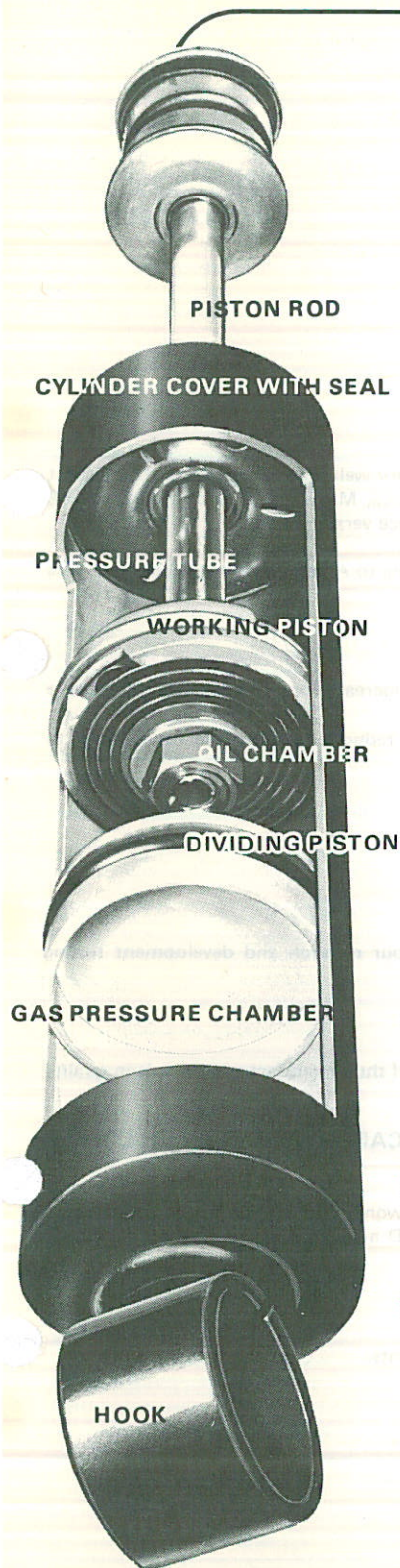
November
1973

Bulletin Number 1 Section 4

Camshaft Data

<u>Part #</u>	<u>Designation</u>	<u>Intake</u>	<u>Exhaust</u>	<u>Lift</u>	<u>Valve Lash Hot</u>	<u>Duration</u>
419258	D	29-71	71-29	10.4mm 10.4mm	0.40/0.45mm 0.40/0.45mm	280° 280°
460509	F	31-89	89-31	10.8mm 10.8mm	0.40/0.45mm 0.40/0.45mm	300° 300°
460814	R	43-64	65-42	11.2mm 11.2mm	0.25mm 0.25mm	287° 287°
824706	G (Marine)	52-76	92-36	11.6mm 11.6mm	0.40/0.45mm 0.40/0.45mm	308° 308°

Note: As is apparent from the intake and exhaust specifications, the R & G Camshafts are of non-symmetrical design.



ANSWERS TO QUESTIONS MOST FREQUENTLY ASKED ABOUT THE BILSTEIN "RISING RATE" GAS PRESSURE SHOCK ABSORBER.

1. Q: WHAT DO YOU MEAN BY "GAS PRESSURE" SHOCK ABSORBER?

A: The BILSTEIN Gas Pressure Shock Absorber is a telescopic, mono-tube unit filled with nitrogen gas and hydraulic oil. The gas, sealed in a special compartment at 25 times atmospheric pressure, exerts constant high pressure on the oil column eliminating cavitation and foaming. The **absolute elimination of foaming** results in uninterrupted damping, for even the smallest wheel deflections, (2mm); a performance which no other type of shock can claim or match.

2. Q: WHAT DO YOU MEAN BY "RISING RATES"?

A: Rising rate means that the rate or damping coefficient increases as suspension movements become more rapid, such as on rough surfaces or high speed cornering. With BILSTEINS, a smooth comfortable ride is provided at all times with exactly the right amount of control for changing terrain, road and driving conditions.

3. Q: WHAT ARE THE ADVANTAGES OF SINGLE TUBE DESIGN?

A: The advantages are:

a) better heat dissipation, which means, better performance. A shock absorber is an "energy converter"; "spring energy" has to be converted into "thermal energy" and the resulting heat has to be dissipated as fast as possible.

A shock absorber's effectiveness is directly proportional to its ability to dissipate heat. A BILSTEIN shock can handle working temperatures of up to 480 degrees without changing characteristics.

b) Much greater piston area: greater sensitivity for small piston movements.

c) They are lighter; reduced "unsprung mass" allows wheels and tires to respond more readily to surface irregularities for improved control; also by lowering the unsprung masses, wear of suspension and steering components is reduced.

4. Q: HOW LONG WILL THEY LAST?

A: Like any precision machine, they cannot last forever. Operating conditions will determine their life. However, BILSTEINS contain no ball check valves or moving parts other than the pistons; no springs and no hinge pins to wear out, deteriorate or get weak with age, use and heat. They outlast almost any other shock absorber in the same application.

5. Q: HOW DOES BILSTEIN COMPARE WITH OTHER SHOCK ABSORBERS?

A: BILSTEIN "rising rate" shocks cannot be compared with any multi-tube reservoir shock. BILSTEIN technology is so far ahead and so different that performance cannot be equaled.

6. Q: WHY AREN'T BILSTEINS ADJUSTABLE?

A: A BILSTEIN doesn't need adjustment to compensate for wear or for varying surfaces. The shock responds instantaneously to the speed of suspension movement to provide the exact damping characteristics required for maximum control, safety and performance. Other shocks need adjustment because the settings are a compromise. They need adjustment according to how they are to be used.

BILSTEIN

CORPORATION OF

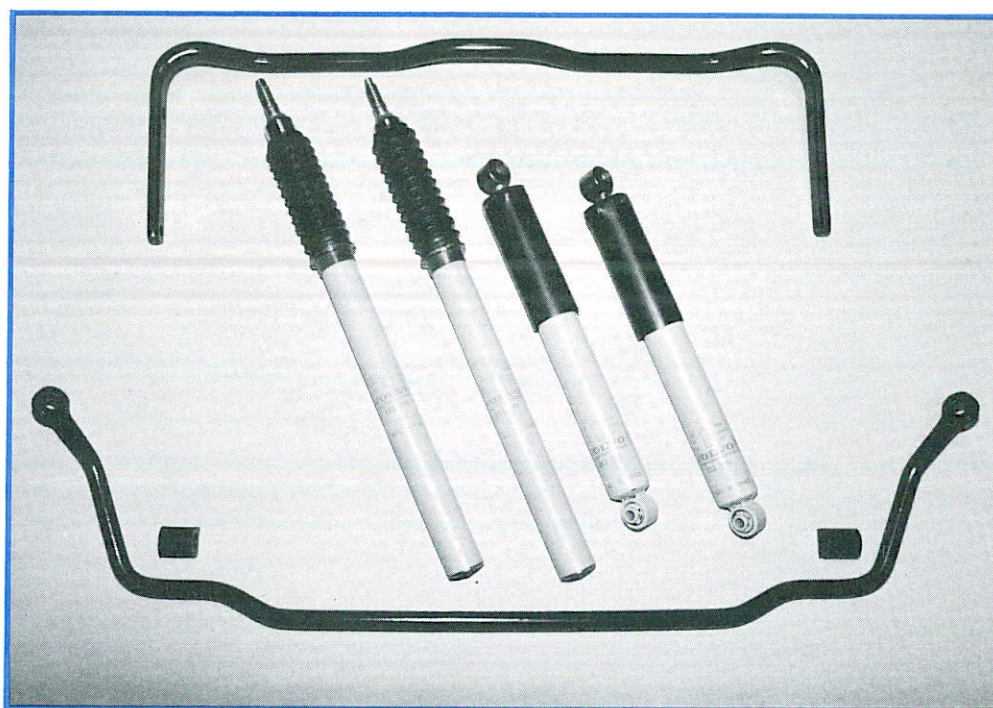
AMERICA

11760 SORRENTO VALLEY RD., SAN DIEGO, CA 92121, 714/453-7723





NEW 240 HANDLING PACKAGE



Sharp bends, high speeds . . . It takes more than good tires to stay on the road.

Now from Competition Service, de Carbon gas-pressure shocks and front and rear anti-sway bars for the 240 series.

Superior gas-pressure shock absorbers that won't foam or fade. Firmer setting controls wheel movement under the most demanding conditions.

New and larger anti-sway bars improve road stability, increase resistance to cross-wind and reduce body roll during cornering.

GAS-PRESSURE SHOCK ABSORBERS for both the 240 and 260 series

Qty.	Part Number	Description	Model
2	552195-0	Front Shock	240/260
2	552196-8	Rear Shock	240/260

ANTI-SWAY BARS

Qty.	Part Number	Description	Model
1	552096-0	Front and Rear Sway Bar Kit	75-76 240
1	552097-8	21mm Front Sway Bar only	75-77 240
1	552098-6	25 mm Rear Sway Bar only	75-76 240/260

For further information concerning handling equipment for our other models, see the new section 5 of your Competition Catalog.



NEW T-SHIRTS



A new men's heavy weight t-shirt is now available exclusively from Volvo Competition Service. Your choice of three colors and two logo types makes it the perfect wearing apparel for all Volvo owners.

High quality construction and 100% cotton make for a well tailored and long lasting t-shirt.

WHITE WITH BLUE "VOLVO"

Part Number	Size
552077-0	Small
552078-8	Medium
552079-6	Large
552080-4	X-Large

BLUE WITH BLUE "VOLVO"

Part Number	Size
552081-2	Small
552082-0	Medium
552083-8	Large
552084-6	X-Large

YELLOW WITH BLUE "VOLVO" AND BLACK "COMPETITION SERVICE"

Part Number	Size
552085-3	Small
552086-1	Medium
552087-9	Large
552088-7	X-Large

For further details concerning sports clothing from Competition Service, see the new section 7 of your Competition Catalog.

VOLVO



Competition Service

1955 190th STREET
TORRANCE, CA 90509

(213) 770-1550

June 17, 1974

Mr. Thomas H. Morris
8018 Tarbell Road
Houston, Texas 77034

Dear Mr. Morris:

We sincerely thank you for your recent letter regarding competition equipment for the Volvo.

Volvo Competition Service is a newly formed department under the management of Volvo of America Corporation. Based at Volvo Western Distributing in Torrance, California, we handle all competition activities and distribution of equipment for the entire United States. Since we are a direct extension of our factory competition service in Gothenburg, Sweden, we offer primarily rally oriented equipment that is especially designed for the 120 and 140 series, but in many instances can be applied to our 544, 1800, 164 models.

We offer a very comprehensive competition service catalogue, which outlines all parts and equipment available for high-performance applications. The catalogue contains the following information in six different sections:

1. Complete Homologation Forms for 120 and 140 series.
2. Competition Parts which cover the following areas:
 - a. Hi-performance engine parts for B-18, B-20 models.
 - b. Stage I, II, III tuning kits (140 to 185 h.p.) B-20.
 - c. Exhaust systems.
 - d. Power-train components.
 - e. Suspension, spring and brakes.
 - f. Protection plates.
 - g. Drivers' seats.
 - h. Instruments.
 - i. Lighting equipment.
 - j. Safety parts.
 - k. Body reinforcements.
 - l. Fiberglass body parts.
 - m. Spare parts for Solex carburetors.

VOLVO

1955 190th STREET
TORRANCE, CA 90509

(213) 770-1550



Competition Service

June 17, 1974

Page Two

3. Competition Equipment, such as:

- a. Factory - Competition winter rally jackets.
- b. Wind-breakers.
- c. Sweat-shirts.
- d. T-shirts.
- e. Badges.

4. Tuning Information for Stage I and II engines.

5. Price Lists.

6. Miscellaneous Bulletins.

Since the four-ring loose-leaf binder is rather extensive, we are forced to charge a nominal fee of \$4.95 to cover production costs. A check or money order made payable to Volvo Western Distributing will assure you of a catalogue with an unlimited up-dating service which includes future bulletins and technical information. Due to the demand and lengthy production, please allow several weeks for delivery.

Volvo Competition Service (America) is presently engaged in developing hi-performance equipment more suitable to the United States market. Such things as shorter springs and anti-sway bars shall soon be announced via our up-dating service. We currently do not offer any contingency awards for anyone racing a Volvo in competition events. However, if you hold a current competition license or club membership card you may apply to us for direct shipment of parts at a reduced price, otherwise all parts are to be ordered through your local Volvo dealer. They will be happy to let you use their competition catalogue for ordering purposes.

If I can be of any further assistance, please feel free to contact me directly.

Sincerely yours,

A handwritten signature in cursive script that reads "Wayne M. Baldwin". The signature is written in dark ink and is positioned above the typed name.

Wayne M. Baldwin, Manager
Competition Service Department

WMB/jd

October, 1974

NEWSLETTER

RACE AND RALLY ACTIVITY

Jim Walker, New Car Salesman of Ann Arbor Volvo, and Terry Palmer of Jackson, Michigan have just accomplished their third victory in four events of the S.C.C.A.'s Pro Rally Series. Walker and Palmer are now second in Pro Rally point standings while Volvo retains third place in the Manufactures National Rally Championship.

Walker and Palmer will be formidable contenders in this year's running of America's only International F.I.A. World Championship Rally - The "Press-On-Regardless".

Bob Hourihan of Michigan, long time successful rallyist, has also decided to drive a Volvo in the October 29 thru November 2 event, as well as 122s owner, Tom Tolls of Michigan.

Congratulations to your past achievements and we wish you good, safe running in the P.O.R.

The recent running of the Score Baja International (Baja 500) and Mickey Thompson's Score World Championship of Off-Road Racing saw Dennis Lundstedt of Fullerton, California pilot his Volvo 142 to 4th and 3rd places respectively in production sedan class. Congratulations Dennis.

In the racing world, we find several owners becoming leading contenders in S.C.C.A. B sedan and E production. In particular, Dr. Arthur Mollin of New York continuously places 1st through 3rd in the very competitive Northeast. Carlo and Mario Gardini of McKeivitt Volvo in Berkeley, California captured a 1st place at Laguna Seca late September, and Herb Adams of San Rafael, California has just completed his first I.M.S.A. season with Volvo competing successfully in the Goodrich Racing Sedan Series. Volvo Competition Service wishes to congratulate you all for a good, fun and safe racing season.

TECHNICAL NOTES

Dealers and owners of Bilstein gas pressure shock absorbers should make note of proper installation procedures.

1. The front shocks of all 140 and 160 models are extremely large in diameter and do not fit properly through the opening of the bottom A-arm. About one minute of filing to remove 1/16" of A-arm material will allow the shock to slide through.
2. There has been some complaint of rear suspension noise from 140 and 164 owners using the "Rally Sweden" (extra firm) Bilstein. The shock firmly dampens even very small movement and thus may cause a noise at certain suspension mounts, notably, the upper shock mounting bolt and the support arm/axle mounting point. Make sure they are tight and free of play.

Volvo Competition Service has just completed "Project Express", a promotional vehicle and rolling test bed for present and future competition products. The 145 based Swedish delivery van features a variety of suspension changes undergoing test as well as our new 2200 c.c. Stage III B-20. After 2000 miles, our Express engine is developing 182 Din H.P. at 6250 R.P.M. with 177 ft. lbs. of torque at 4250 R.P.M. It is very flexible and streetable with a steady idle at 950 R.P.M. Skid pad and other performance data will be included in the next Newsletter.

October, 1974

NEW PRODUCT INFORMATION

ENGINE - STAGE III VALVES

Polished, lightened, dished and Stellite hardened just like our Stage II valves. Primarily designed for the 2190 c.c. Stage III, they have proven to extract another 6 h.p. out of our Stage II and other highly modified cylinder heads.

<u>Part Number</u>	<u>Description</u>	<u>Suggested Retail</u>
552823-7	45mm Intake Valve	17.63 ea.
552824-5	37mm Exhaust Valve	22.99 ea.

ENGINE - FORGED ALUMINUM PISTONS

Volvo original equipment cast aluminum pistons have proven to be race and rally worthy in all but the most demanding conditions. They should remain satisfactory until the following limits:

1. 12:1 COMPRESSION RATIO
2. 40° TOTAL ADVANCE
3. 7000+ R.P.M.'s

If you plan to run higher than any of the above limits, contact us about genuine Volvo Forged Aluminum Pistons. Available in 2000 c.c. and 2200 c.c. sizes.

October, 1974

SUSPENSION - ANTI-SWAY BARS

Developed in Sweden for the Volvo Cup series. 25mm front and 20mm rear adjustable sway bars for those who don't mind giving up a good ride for absolute flat cornering. Reduces body lean and tire roll-over to race track specifications. Surfaced in rust resistant black, shot-peened for uniform surface flex and dependability. Made, tested and proven by AB Volvo. Not recommended for street due to harsh ride and rear suspension noise.

<u>Part Number</u>	<u>Description</u>	<u>Suggested Retail</u>
552174-5	Front & Rear Sway Bar Kit	234.35

Not stocked, special order from Sweden only. Allow 3 to 6 weeks for delivery.

CLOTHING -

WINTER JACKETS - Fur collar, very heavy lining for severe weather conditions. Not stocked, specially ordered from Sweden only. Allow 3 to 6 weeks for delivery.

RALLY JACKETS - All sizes in plentiful stock. Sizes run a little long in arm length. Recommend one size smaller than normal if shoulders are not extremely broad. (Wash on delicate cycle only or dry clean.)

SUMMER JACKETS - All sizes in plentiful stock.

T-SHIRTS - Strongly recommend ordering at least one size larger than normally worn. A new T-Shirt is beginning to replace our present stock of the tight-sleeved variety. Made in Sweden, the new design resembles American made counterparts with large sleeves, high neck, and slightly larger chest and overall length.

Additional jacket brochures available upon request.

VOLVO

*Competition
Service*

PROD	SECTION
Winter Jackets Sweat Shirts T-Shirts	3
DATE	NO.
October, 1974	20:1

Ski Jacket design results in extra long sleeves to partially cover hands. Recommend one size smaller if normal sleeve length is desired. Delicate cylce wash or dry clean.

<u>Part Number</u>	<u>Description</u>	<u>Size</u>
552974-8	Rally Jacket	6 to 8 years
552976-3	Rally Jacket	10 to 12 years
552977-1	Rally Jacket	14 years (extra small ladies)
552978-9	Rally Jacket	16 years (small ladies)
552979-7	Rally Jacket	Extra Small Men
552980-5	Rally Jacket	Small
552981-3	Rally Jacket	Medium
552982-1	Rally Jacket	Large
552983-9	Rally Jacket	Extra Large
552984-7	Rally Jacket	Extra Extra Large

Suggested retail price on sizes up to and including 16 years \$33.00. All others \$39.27.

<u>Part Number</u>	<u>Description</u>	<u>Size</u>
552986-2	Summer Jacket	Small
552987-0	Summer Jacket	Medium
552988-8	Summer Jacket	Large

Suggest retail price \$19.90.

A very heavy jacket with fur collar and "Volvo" lining. Small Competition Service "victory hand" embroidered on front.

<u>Part Number</u>	<u>Description</u>	<u>Size</u>
552991-2	Heavy Winter Jacket	Extra Small
552992-0	Heavy Winter Jacket	Small
552993-8	Heavy Winter Jacket	Medium
552994-6	Heavy Winter Jacket	Large
552995-3	Heavy Winter Jacket	Extra Large

Suggested retail price \$51.65. Special order from Sweden only. Allow 3 to 6 weeks for delivery.



April, 1975

NEWSLETTER

The January issue of the VCS Newsletter has been combined with our April issue due to the lack of competition activity during the winter months and the fact that we have been extremely busy in producing a new Competition Catalogue.

That's right, a completely new and revised Competition Catalogue to take the place of your present one. The new catalogue will follow the format of our Volvo Parts Book/Microfiche, with sections One through Ten pertaining to various areas of the vehicle. Ninety percent of the parts will be accompanied by a photograph, technical description and a note describing the difference between standard and competition performance.

NEW PRODUCTS

The two enclosed sheets picturing the Mobelec Ignition and Volvo Jacket Patches should be inserted into Section 3 of the Competition Service Catalogue.

Both data sheets can be referred to for specifications, applications and part numbers.

240/164 Series Suspension Parts

There have been many requests for improved handling kits and separate components for the 75 models. Most requests have stemmed from articles appearing in a few magazines, who erroneously assumed that since Volvo had a Competition Department, they must have the new parts.

Sweden is just now completing tests on heavier front and rear sway bars and stiffer shocks and springs for the 240 series. We hope to offer this equipment to the U.S. Volvo Dealer some time in June or July. Price has not been determined yet.

A larger front anti-sway bar for the 164 should be available about the same time.

RACE AND RALLY ACTIVITY

The competition season for 1975 is just now underway and Volvo owners are off to a good start. In the S.C.C.A. Pro Rally Series, styled after the European endurance events, Volvo ties for first place as leading Manufacturer in the first two of twelve events.

This was accomplished by a 2-3 finish in both events - thanks to the efforts of Michiganites Jim Walker/Joe LeBeau in the Ann Arbor Volvo 142, Bob Hourihan/Doug Shepherd in the McConnell Motors 142, and Tom Tolles/Virginia Reese in their Volvo 122.

Hourihan will be the only Volvo entered in the upcoming Washington/Oregon events in an effort to gain championship points for himself and Volvo.

On the race track we find Art Mollin in his 142 departing temporarily from his S.C.C.A. activity to tackle the G.T. class of I.M.S.A. at the "24 Hours of Daytona" and the "Sebring 12 Hour". Art is the first to enter a Volvo against the very fast and competitive factory works cars of Porsche and B.M.W. Art retired after 12 hours of running at Daytona but hopes to put the experience gained to good use at Sebring.

On the west coast, Carlo and Mario Gardin of McKeivitt Volvo have switched from their competitive 122 of last season to a fresh looking 142. Both Gardin and Mike Lipscomb in his 142 should be top contenders in the San Francisco region's B sedan class for 1975.

TECHNICAL

We are still receiving a few complaints about a slight knocking noise occurring from the installation of rear Bilstein shock absorbers on 140/160 models. Investigation has shown that in nearly 100% of the cases, the top shock absorber mount is at fault. This problem is a result of one of following:

1. Excessive clearance between top shock absorber bushing and mounting bolt. Check for wear.
2. Top mounting bolt may be too long, thus "bottoming out" on inside of body member before sufficiently tightening shock.
3. Top bushing of shock should be 1 3/4" in length to insure tight fit.
4. Any deformation or out of round condition of top bushing can cause noise and should be replaced.



NEW PRODUCT INFORMATION

MOBELEC ELECTRONIC IGNITION SYSTEM

A new, heavy duty, competition proven electronic ignition is now available for most Volvo models.

Used successfully for two years in European rally competition, the Mobelec system has been found to offer several advantages over conventional and C.D. or other electronic ignition systems.

1. Magnetic pick-up eliminates the need for points and condenser forever. There is never any point float, gap setting, dwell, or condenser failure to worry about. Eliminates all but spark plug maintenance on the ignition side of the tune-up.
2. Timing will never vary because there are no points to wear down.
3. Extremely high voltage will continue to fire spark plugs thousands of miles beyond their normal life.
4. Intense spark means more efficient combustion for increased gas mileage, stronger, smoother performance, easier starts.
5. High voltage across entire R.P.M. range means spark plugs of one or two grades colder may be used. Especially good for competition or hard street driving.
6. Reliability that is unparalled in electronic ignition systems.

<u>Part Number</u>	<u>Description</u>	<u>Suggested List</u>
552033-3	Mobelec Ignition	\$98.50

MOBELEC ADAPTER PLATE APPLICATION

<u>Year</u>	<u>Model</u>	<u>Engine</u>
1969-1972	140	B20A/B20B
1969-1974	1800	B20B/B20E/B20F
1971-1974	140	B20E/B20F
1969-1974	164	B30A/B30F

Installation of Mobelec in below models requires cutting and removal of armor cable between ignition switch and coil.

1962-1968	544,120,1800	B18
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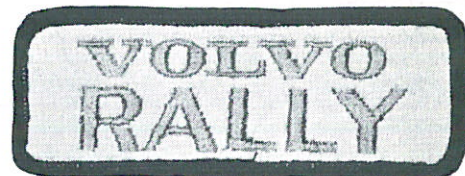
VOLVO

Competition Service

• JACKET PATCHES •



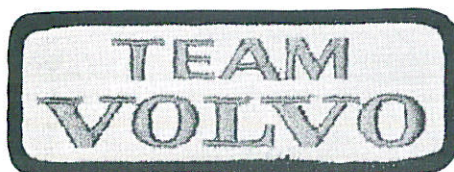
(A)



(B)



(C)



(D)



(E)

ITEM	PART NO.	DESCRIPTION			PRICE RETAIL
(A)	552 917-7	Large Racing	4½" x 1½"	blue/white/black	.75
(B)	552 918-5	Volvo Rally	4" x 1½"	blue/white/black	.60
(C)	552 916-9	Super Volvo	3" x 4½"	full color	1.19
(D)	552 920-1	Team Volvo	4" x 1½"	blue/white/black	.60
(E)	552 919-3	Small Racing	4" x 1½"	blue/white/black	.60
(F)	552 921-9	Assortment Pack (one of each)			3.73

VOLVO
Competition Service.



JUNE, 1975
No. 2-75

NEW PRODUCT INFORMATION

SUMMER JACKETS

A new Summer Jacket is now available from Volvo Competition Service. This new jacket replaces our earlier "Finnish" jacket that sold for \$21.00. We are pleased to offer this new, re-designed Summer Jacket for a greatly reduced price of \$14.90, suggested list.

Please review the enclosed flyer and the below for ordering information.

<u>Old Part Number</u>	<u>New Part Number</u>	<u>Description</u>
552986-2	552930-0	Small
552987-0	552950-8	Medium
552988-8	552989-6	Large
	552990-4	X-Large

VOLVO

Competition Service

SUMMER JACKETS



100% nylon, machine washable, Volvo blue in color with black and white stripes running length of sleeve. Complete with hip zipper pocket, "Team Volvo" patch and button cuffs.

PART NO.	SIZE AND DESCRIPTION	SUGGESTED PRICE	DEALER DISC. CODE
552930-0	Small 34-36 summer jacket	14.90	C
552950-8	Medium 36-40 summer jacket	14.90	C
552989-6	Large 42-44 summer jacket	14.90	C
552990-4	Extra Large 46 summer jacket	14.90	C

July, 1975

NEWSLETTER

CATALOG HOLDERS ! !

It's with extreme pleasure that we finally enclose our totally new Competition Service parts and equipment catalog, with our compliments.

As we're sure you have noticed, gone is the blue loose-leaf binder, homologation papers, lack of technical description and specification, and general overall vagueness and disorganization.

The new catalog is less expensive, more readily available, far more easier to use, and contains nearly twice the information.

It will be up-dated and re-printed about once a year and become available at your local Volvo dealer.

However, due to the catalog's new format, it cannot be easily up-dated by the holder - only by us in the form of a complete reprint. We fully realize that this was not the case when you purchased our former catalog which included occasional up-dates.

For those of you who still wish to receive our up-dates, we have attached a form for you to fill out and return to us. This will indicate to us that you still desire up-dates and also afford us a chance to up-date our records.

Future up-dates will be keyed to the format of the new catalog, and not the old.

Hope you enjoy the new catalog.

VOLVO COMPETITION SERVICE

NEWSLETTER

VCS has decided to introduce a newsletter for our enthusiastic owners and employees. The newsletter, along with other support materials, will be distributed to all competition catalogue holders every 8 to 10 weeks.

The newsletter will highlight new products and developments, technical advice and Volvo owner's racing activities.

- PROMOTION MATERIALS -

Full color posters and brochures shall be available to all participating Volvo dealers in the near future. Details will be announced.

- PARTS INFORMATION -

A new set of jets have been developed for Solex 45DDH carburetor. Specs:

Main Venturi -	40mm
Main Jet -	150
Emulsion Tube -	120

This jet set is designed for all stage II engines (or any engine using a highly modified cylinder head) and supplements the earlier "marine setting". Results are more horsepower over a wider range of R.P.M.'s.

<u>Part Number</u>	<u>Description</u>	<u>Suggested List</u>
1155115-7	Solex Jet Set	\$62.33

Includes all necessary parts for both carburetors.

June 28, 1974

We now have a huge stock (hundreds) of the additional items enclosed with this mailing. All Volvo clothing is available with the exception of summer rally jackets: 552986, 552987, and 552988. We are sorry for this back order situation. Sweden still has no E.T.A.

Part number 552308-9 Safari Jerrican and part number 552309-7 Filler Hose are no longer available due to U.S. Federal regulation.

- RACING ACTIVITIES -

It seems that since we decided to re-establish a competition department in the U.S., many owners are trying to re-establish Volvo as a dominant force in race and rally events.

In the rally world, our sincere congratulations go to Jim Walker and Terry Palmer of Ann Arbor, Michigan.

Jim and Terry have piloted their 72 142 on to two first overall victories in the S.C.C.A. Pro Rally Series. Since they have only been able to enter two of the past five events, their record remains perfect. Palmer and Walker are running a close second in championship points in this, America's foremost rally series.

In the racing world, we offer our sincere congratulations to Herb Adams of Santa Ana, California.

Herb is campaigning a 1968 142 in the I.M.S.A. Goodrich Radial Challenge Series. Adams is faced with overwhelming odds as he battles against factory supported B.M.W.'s, 6 cylinder A,C Gremlins, Dodge Colts and a host of other road racing machinery.

With very little time for preparation, Adams entered his very first race with the Volvo at Laguna Seca in Monterey a few weeks ago. Adams found himself driving to 4th overall after 3 hours of racing. The following week, Adams captured 7th at Ontario Motor Speedway. Not bad after two events. Herb packs his bags for the June 29th event in mid-Ohio. Check your sports section for the outcome.

VCS would like to hear racing results from anyone driving a Volvo.

Due to the fact that most S.C.C.A. racing is regional, we only receive results for the nationals.

Anyone interested in race result, upcoming events, rules and regulations or participation, should contact either Volvo Competition Service or the race organization itself.

VOLVO

COMPETITION SERVICE

NEW PRODUCT INFORMATION

STEEL TIMING GEARS:

The kit includes a steel camshaft gear rather than the standard fiber type. Designed for B-18, B-20 and B-30 engines that are continuously subjected to 6000+ R.P.M.'s.

An absolute must for competition use. CAUTION: If used in standard muffled engine, a slight "whrrr" type noise may occur.

<u>Part Number</u>	<u>Description</u>	<u>Suggested List</u>	<u>Dealer Net</u>
875375-8	Steel Timing Gears	74.13	59.30

Available only from VCS.

STAGE II COMPETITION CLUTCH:

A clutch designed to withstand the increase horsepower and torque of our Stage II engines (165 Din H.P.).

This Borg & Beck diaphragm clutch has a 40% greater clamping force than standard, yet only requires 15% more pedal pressure. Release action remains the same through maximum R.P.M.'s. Recommended for all high performance B-18 and B-20 engines.

<u>Part Number</u>	<u>Description</u>	<u>Suggested List</u>	<u>Dealer Net</u>
418930-4	Clutch Pressure Plate	47.10	32.97

Available only from VCS.

Accompanying disc and bearing available from all Volvo distributors.

<u>Part Number</u>	<u>Description</u>
418871-0	Disc
380569-4	Release Bearing

VOLVO

Volvo of America Corporation
Western Division

COMPETITION SERVICE



1955 190th Street
Torrance, California 90509
Phone: 213-770-1550
Telex: 67277

October 10, 1977

To: All Catalog Holders

With this mailing comes information concerning three widely varied subjects; performance, looks, and entertaining information.

Performance refers to our new Rally Exhaust System available for most 4 cylinder models. Many of the important features are outlined on the enclosed leaflet, but a few points have been left out. Like, how it compares to other after market exhaust systems.

Our engineers designed this system for maximum performance, durability under extreme conditions, and long life. Other systems tend to consider appearance and sound as their most important criteria.

Additionally, our system is manufactured to fit in exactly the same way as a standard Volvo system. Other systems sometimes require bending, drilling or even a muffler shop to install it.

The price? We feel you will be pleasantly surprised when compared to other after market systems. Please contact a Volvo dealer in your area for price information.

To add that GT look to your Volvo, side rally stripes are available for all 2 door, 4 door and wagons of the 140/160 and 240/260 series. It is an inexpensive way to quickly change a standard looking car into something more sporty. The stripe works exceptionally well when used in conjunction with our GT mag wheels, black sidewalls, and a front spoiler. The price has just been reduced on these stripes so, again, kindly contact your Volvo dealer for price information.

The entertaining information comes in the form of a reprint from "Road Test Magazine" featuring the Volvo "RoadSport". It should be pointed out that the pricing information may not be valid at this time as the information gathered for this article was well over a year ago. Additionally, shorter firmer springs as mentioned in the story will not be available for another few months.

We hope you find the story entertaining and interesting. If you care to read Part III of "Volvo RoadSport", it can be found on the cover of the October 1977 issue of "Road Test Magazine".

Volvo Competition Service

VOLVO

Competition Service

RALLY EXHAUST SYSTEM



A complete free-flow exhaust system is now available for all 120, 140 and 1975 240 models.

Features include:

- Larger two inch pipe and free-flow muffler design for reduced back-pressure
- Performance increase between 6 and 10 DIN horsepower
- A deep but pleasant tone that won't disturb neighbors
- Uses existing attachment points with mounting kit included
- A complete package that includes all pipes, mufflers, hangers, clamps and gaskets. Designed to bolt onto the standard exhaust manifold.

<u>Part Number</u>	<u>Description</u>	<u>Model</u>
552299-0	120 Rally exhaust system (does not fit 120 series wagon)	120/130 up to and including 1966
552300-6	120 Rally exhaust system (does not fit 120 series wagon)	120/130 1967 - 1968
552298-2	140 Rally exhaust system	140 1967 - 1973
552289-1	140/240 Rally exhaust system	1974 140 without EGR; 1975 240 B20 without EGR or catalytic converter

VOLVO

Competition Service

RALLY STRIPES



- Adds that sporty GT look especially when used with GT mag wheels
- Top quality material resists boiling sun, freezing snow and damaging mud and sand
- Fits all 140/160 and 240/260 models
- Available in white with thin black line or black with white thin line
- Installation instructions included

<u>Part Number</u>	<u>Description</u>
552306-3	White rally stripes
552307-1	Black rally stripes

VOLVO

Competition Service.



October 1975

To All Catalog Holders

NEWSLETTER

The various new product brochures enclosed with this mailing represents the beginning of a new direction in "street" performance parts rather than our familiar all-out competition equipment.

In the next few months several new products intended for street use will be appearing in our line along with the continuing development of full-race competition parts.

As in the past, you will be informed of any new developments via our up-dating service.

RACE AND RALLY ACTIVITY

Volvo owners have been doing very well in the S.C.C.A.'s Pro Rally Series this year. The 142's of Bob Hourihan of Texas and Jim Walker of Ann Arbor Volvo, Michigan, have managed to keep Volvo as a top contender for the Manufacturer's Rally Championship.

Major racing activity has primarily taken place in the S.C.C.A.'s B-sedan category. The West Coast seems to be the most popular for Volvo this year with eight different owners campaigning four different models.

Volvo Competition Service wishes to congratulate all drivers, co-drivers and crews for a very successful, competitive and safe race and rally season.

Sincerely,

VOLVO COMPETITION SERVICE

October, 1975

RALLY EXHAUST SYSTEM

Now a complete free-flow exhaust system is available for the 140 series up to and including 1973.

Features:

- Larger 2 inch pipe for reduced back pressure
- Straight thru muffler design for increased horsepower and fuel economy
- Pleasant but sporty exhaust tone
- Uses existing mounting points

Each kit includes front and rear mufflers, cross-over and tail pipe and a complete mounting kit.

Part Number	Description	Sugg. List
552279-2	140 Exhaust	101.65

Note: For maximum efficiency, the front muffler has been designed to connect with the larger diameter of the front manifold pipe on all fuel injected engines, part number 684198. Therefore, 1971 and earlier models with carburetors must either change to the F.I. pipe or have a shop install a pipe reduction adaptor for smaller pipe.

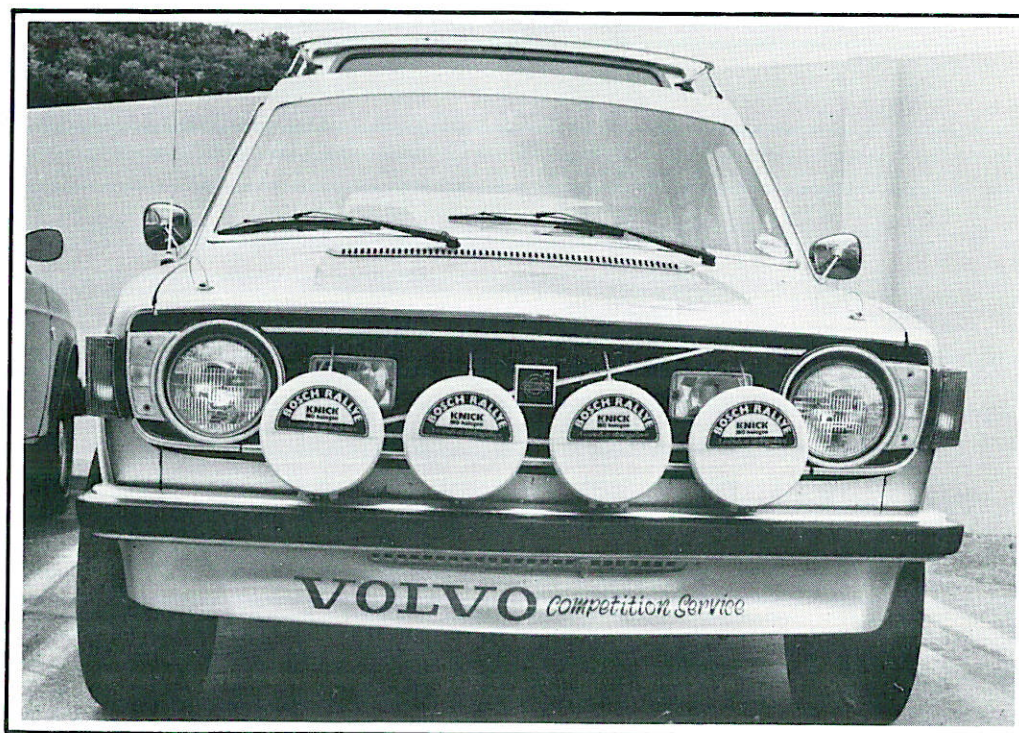
Exhaust systems for 120, 1974 140, 160 and 240 will be available late this year.

Chrome exhaust tip shown in color wall poster is presently not available.

SPOILERS

THE TRUE GT LOOK OF SPOILERS DESIGNED AND BUILT BY VOLVO

- Improves road holding stability
- Increases top speed
- Better fuel economy from reduced vehicle air drag



VCS Express

<u>Part Number</u>	<u>Description and Mounting</u>	<u>Sugg. List</u>
552165-3	120 Spoiler attached to body (without front bumper only)	59.39
552166-1	140 Spoiler attached to body	59.39
552168-7	240 Spoiler attached to front bumper only	65.69

Spoilers are made of unpainted fiberglass but can easily be matched to original Volvo finish by our convenient touch-up spray cans that are keyed to each color code. Each spoiler is supplied with mounting kit and installation instructions.

Additional brochures available upon request.

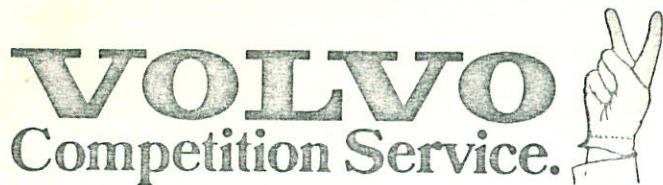
VCS HAT



DESIGNED AFTER THE "AUSTRALIAN BUSH" HAT!

- Washable, 100% Swedish cotton
- Volvo blue with the white victory hand on front and "Volvo Competition Service" tucked under the snap-lock brim and pocket.
- Perfect for keeping the sun off your head at your favorite outdoor event.

<u>Part Number</u>	<u>Description</u>	<u>Sugg. List</u>
552222-2	Small VCS Hat	7.10
552223-0	Medium VCS Hat	7.10
552224-8	Large VCS Hat	7.10



NEWSLETTER

Catalog Holders

February, 1976

RACE AND RALLY ACTIVITY

Rally

Before the 1976 competition season gets under way, Volvo Competition Service wishes to congratulate all Volvo competitors in 1975 for one of the finest seasons Volvo has enjoyed for some time.

Thanks to the fine performances of such talented Volvo rallyists as Bob Hourihan, Jim Walker, Thomas Tolles and Taisto Hienonen, Volvo managed to capture 2nd place, just one point behind first in the 1975 Manufacturer's Rally Championship.

Race

On the track, Mario and Carlo Gardin of McKevitt Motors, Berkeley, California were the first to ever be invited and enter a Volvo 142 in the S.C.C.A. Road Racing Classic in Atlanta, Georgia. Mario placed an impressive 9th in a class of 24 at his first race ever at the Road Atlanta Track.

Dr. Art Mollin and Richard Straub of New York continued to campaign their 142 in the I.M.S.A. GT Series throughout 1975. They closed the season at the "Daytona 250" in November with a 6th place finish in the under 2.5 liter GT class.

Again, we congratulate all of you for a very safe and successful 1975 and wish you the very best for 1976.

LIMITED SUPPLY OFFER

Fiberglass fenders, hoods, trunk lids and plastic rear windows for the 140 series are no longer manufactured and shall no longer be available when present stocks are depleted.

We have just 18 sets of fenders and 8 sets of hoods and trunks remaining. Remember, these are quality built, factory body parts developed for the European Rally circuit.

They are lightweight, rust-free, and dent resistant.

Part No.	Description	Sugg. List	Savings in Weight
552901-1	Front Left Fender	\$ 54.00	7 lbs.
552902-9	Front Right Fender	54.00	7 lbs.
552903-7	Hood	112.61	35 lbs.
552904-5	Trunk Lid	112.61	30 lbs.
552905-2	Plastic Rear Window	58.80	20 lbs.
552906-0	Special Hood Springs	5.78	

TECHNICAL NOTES

1800 Rally Springs

It has been found that front 120/1800 progressive rate rally spring, P.N. 525060-0, may not correctly fit 1970 and later 1800's.

The larger circumference of the spring introduced on the 1970 model utilizes an upper spacer plate/spring holder that is larger than the rally spring. A special spacer plate will accompany the rally spring at a later date.

Mobelec Electronic Ignition, P.N. 552033-3

There have been a few isolated reports that the Mobelec Ignition may not provide spark when outside temperatures are below freezing. This is due to the slow cranking speed at such temperatures that is not sufficient enough to excite the magnetic pickup located on the distributor plate. To overcome this problem, simply eliminate the gap and have the pickup lightly contact the surface of the timing disc (black plastic ring). This contact will result in a spark under all conditions, provided the power module is working properly.

NEW PRODUCT INFORMATION

Several new products have been introduced for 1976 with still many more to follow. Most of these new products are "street" oriented and are designed to add the look and feel of a true GT sports sedan.

Rear Spoiler

A new fiberglass rear spoiler has been designed to fit the trunk lids of all 140/160/240/260 series Volvo. Although not as functional as our front spoiler at today's highway speeds, it offers a totally new and different GT look that appeals to the younger and more sports minded market. This rear spoiler was designed to enhance and balance the front spoiler of the 140/240 and 260 series.

<u>Part No.</u>	<u>Description</u>	<u>Sugg. List</u>
552167-9	Rear Spoiler	58.02

240/260 Series Rally Shock Absorbers

New gas pressure shock absorbers manufactured exclusively for Competition Service by internationally famous de Carbon.

These shocks are approximately 20% firmer than standard and are designed for sporty street driving rather than all out competition.

<u>Part No.</u>	<u>Description</u>	<u>Sugg. List</u>
552195-0	Front 240 Shock	55.56
552196-8	Rear 240 Shock	36.63

140/160 Competition Shock Absorbers

A new, extra hard front shock absorber has been developed for competitors primarily using Volvo "progressive rate" springs in race or rally. The special de Carbon shock is double the firmness of standard and 30% stiffer than our normal de Carbon.

<u>Part No.</u>	<u>Description</u>	<u>Sugg. List</u>
552189-3	Front Comp. Shock	40.44

Extra Large VCS Hat

A new, extra large hat has now been introduced into our range:

<u>Part No.</u>	<u>Description</u>	<u>Sugg. List</u>
552222-2	VCS Hat Small	7.10
552223-0	VCS Hat Medium	7.10
552224-8	VCS Hat Large	7.10
552225-5	VCS Hat X-Large	7.10

These hats have been fully tested and approved in competition by Sweden's and America's best rallyists. One year warranty covers defects in workmanship or material.

VCS Decal

A new, self-adhesive, vinyl surfaced sticker is now available in packages containing 5 large reflective type and ten smaller type (actual size shown).

As with all the above products, the new decals can only be ordered through your local Volvo dealer.

<u>Part No.</u>	<u>Description</u>	<u>Sugg. List</u>
552002-8	VCS Decals	\$4.99

Note-- Prices quoted above are manufacturers suggested retail. Dealers are free to establish whatever price necessary primarily due to variations in shipping methods and distance from warehouse.



VOLVO
Competition Service

Smaller Size



NEW RALLY JACKET

A New Medium Weight Rally Jacket Has Been Introduced
Into Our Clothing Range.



**This new versatile jacket is neither heavy nor bulky
but warm enough to keep the chill out.**

Features Include:

- Water repellent nylon with warm white fleece lining and quilt lined sleeves.
- Two-button collar and cuffs with two front pockets.
- Two white vertical stripes on the right front side with the Volvo badge located on the left.
- Machine washable with a twelve month warranty against defects in materials or workmanship.
- Made in the U.S. exclusively for Competition Service at a very special savings to Volvo enthusiasts.

Part No.	Description	Size
552043-2	Extra Small Rally Jacket	34-36
552044-0	Small Rally Jacket	36-38
552045-7	Medium Rally Jacket	38-42
552046-5	Large Rally Jacket	42-44
552047-3	Extra Large Rally Jacket	44-48



SHOCK ABSORBER KITS

For 142, 144, 145

New "Gas Pressure" Shock Absorbers Developed Exclusively for
Volvo Competition Service



A complete set of four shocks in a new attractive package under just one part number.

- Manufactured for VCS by world famous "deCarbon", the inventors of the original gas pressure shock absorber.
- Single tube design means less heat, longer life.
- Gas pressure provides gentle ride on smooth surfaces but automatically stiffens when excessive motions begin, such as in cornering and rough roads.
- Available in two settings:

Sport — For all street enthusiasts who desire firmer control but never a harsh ride.

Rally — An extra firm setting on the front for vigorous street use and all out competition in the dirt or on the track. (This setting also recommended if progressive rate springs are fitted.)

Part No.	Description	Suggested List Price
552185-1	Rally Shock Kit	\$145.05
552186-9	Sport Shock Kit	\$138.60

Note: Early 140 series ('67 - '70) must use late type lower rear shock mount.
Installation kit part number 282761-6.

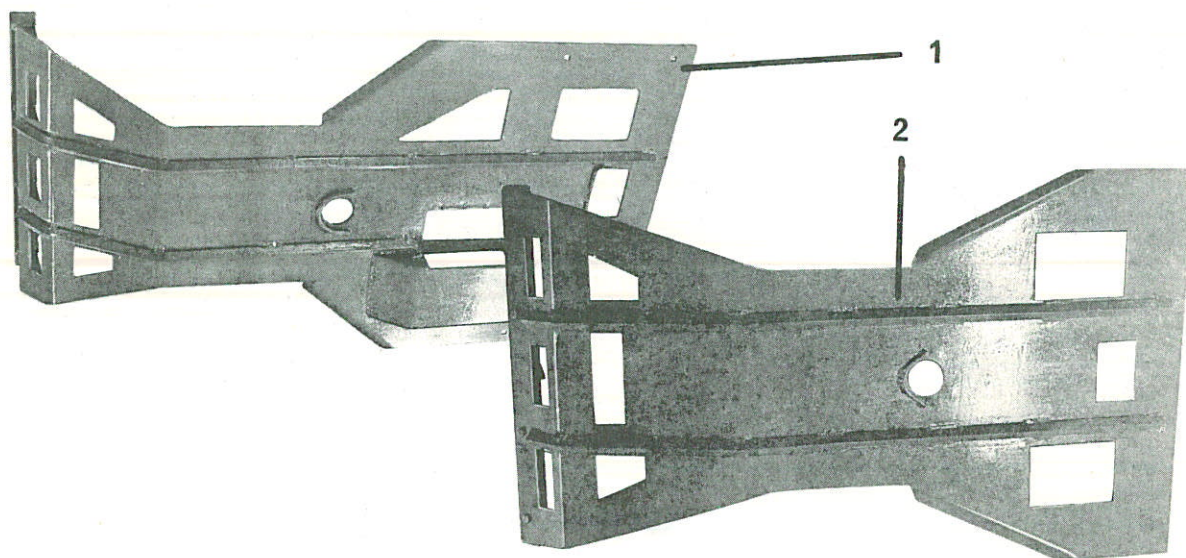
VOLVO Competition Service	Avd Section 2	Nr No 8:2
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Ant	Det. nr	Benämning	Designation
Qty	Part No		
1	552138-0	Bärarm, bakre (modell 67-70)	Support arm, rear (model 67-70)
1	552139-8	Bärarm, bakre (från -71)	Support arm, rear (from -71)
1	552141-4	Nedre stötdämparbult	Lower shock absorber bolt
2	552127-3	Förstärkningsplåt för övre, bakre, stötdämparfäste (se Avd 2 Nr 15:1)	Reinforcement plate for upper, rear, shock absorber anchorage (see Section 2 No 15:1)
2	552142-2	Förstärkningsplåt för bärarms- infästning (se Avd 2 Nr 15:2)	Reinforcement plate for support arm journalling (see Section 2 No 15:2)

VOLVO

*Competition
Service*

Prod P130, P140 SKYDDSPÅTAR PROTECTION PLATES	Avd Section 2
	Nr No 9:1
Datum Date December 1972	



Pos	Ant Qty	Det nr Part No	Benämning	Designation
1	1	552107-5	Skyddsplåt främre kpl, STÅL, P130 Vikt: 32 kg	Protection plate front complete, STEEL, P130 Weight: 32 kilos
1	1	552111-7	Skyddsplåt främre kpl, ALUMINIUM, P130 Vikt: 18 kg	Protection plate front complete, ALUMINIUM, P130 Weight: 18 kilos
2	1	552109-1	Skyddsplåt främre kpl, STÅL, P140 (model 67-70) Vikt: 34 kg	Protection plate front complete, STEEL, P140 (year model 67-70) Weight: 34 kilos
2	1	552115-8	Skyddsplåt främre kpl, STÅL, P140 (från -71) Vikt: 34 kg	Protection plate front complete, STEEL, P140 (from -71) Weight: 34 kilos
2	1	552113-3	Skyddsplåt främre kpl, ALUMINIUM, P140 (modell 67-70) Vikt: 20 kg	Protection plate front complete, ALUMINIUM, P140 (model 67-70) Weight: 20 kilos
2	1	552116-6	Skyddsplåt främre kpl, ALUMINIUM, P140 (från -71) Vikt: 20 kg	Protection plate front complete, ALUMINIUM, P140 (from -71) Weight: 20 kilos

VOLVO



Competition Service

1955 190th STREET
TORRANCE, CA 90509

(213) 770-1550

DISTRIBUTION

DATE

May
1974

Volvo has long meant durability in a road car. Now, Volvo adds a new dimension to the competition equipment area by offering Volvo Competition Service equipment for the Volvo owner interested in closed course or off road use.

Already extensively used in competition in Europe, Africa and South America, both in road races and rallies, Volvo Competition Department equipment is now available in the United States to assist you in your various racing efforts.

All parts listed in this catalog may be ordered through your local Volvo Dealer.

We hope the parts in this catalog will help you, whether you are a racer or an auto enthusiast who just wants a little extra from his Volvo.

For those of you who may have questions about the application of items to your circumstances, please feel free to contact us at:

Volvo Competition Service
1955-190th Street
Torrance, California 90509

Warranty:

All Volvo competition service parts carry the same warranty as any other original Volvo part, i.e., under normal use they are warranted for twelve (12) months with no mileage limit.

This warranty does not apply, however, to any vehicle used in a competitive event.

It should be noted that the installation of equipment which deals with engine modifications and certain other modifications may result in the vehicle not meeting federal or state standards for use on public roads. Check the laws of your home state.

For example, the lighting equipment Bosch "Knick" is expressly for off-road use and is illegal for road use in California.