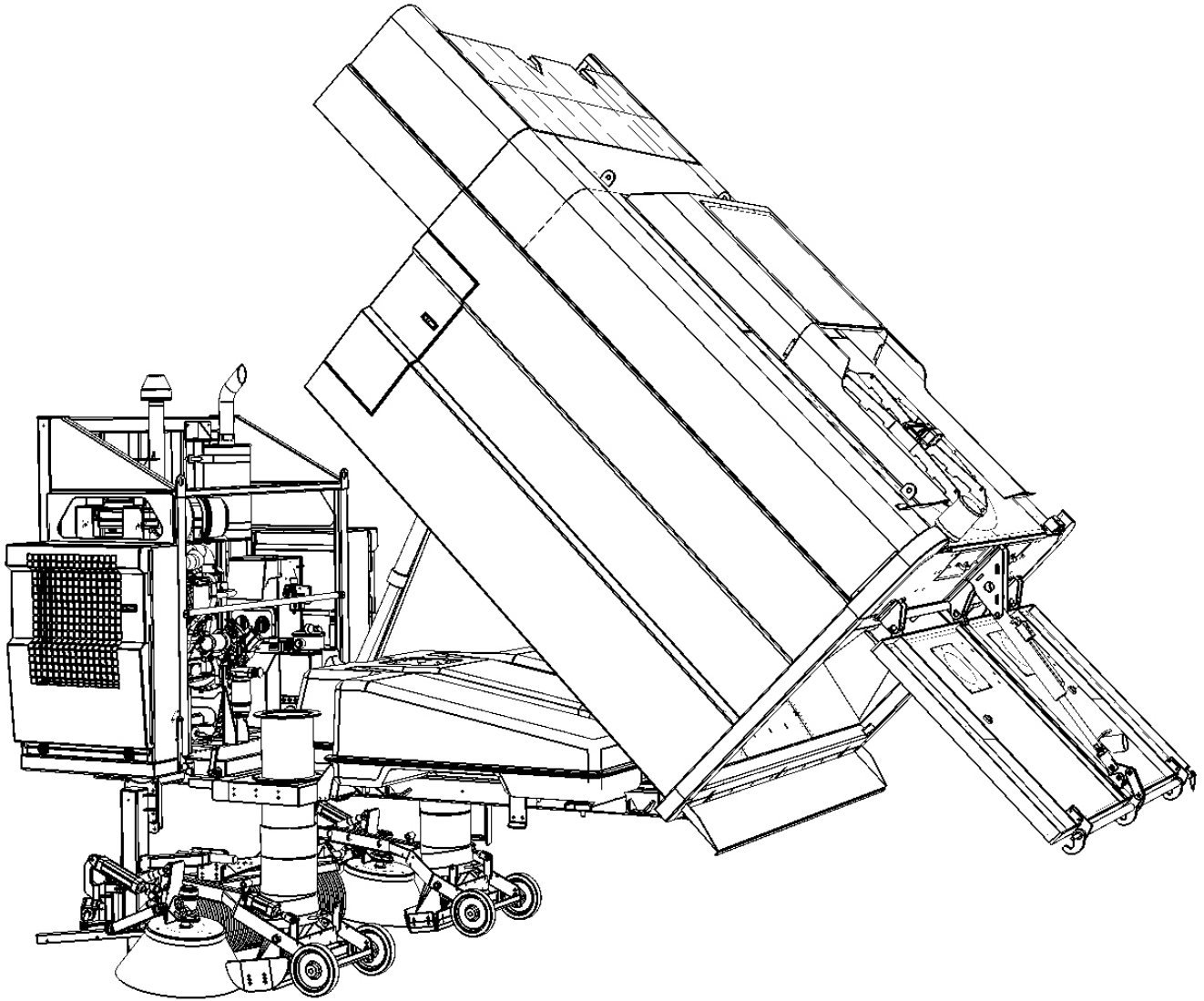


## M6 & FS6000 SWEEPER KIT



The Scarab M6 & FS6000 Sweeper kit has been specifically designed to meet the demands of worldwide operators that require a heavy duty suction road sweeper. The sweeper body has been engineered to allow fast and easy fitment to virtually any internationally available chassis.

The equipment control systems have been simplified to eliminate all but basic maintenance and service requirements, whilst still providing full functionality and a range of options to suit varying operational needs.

Powered by a Cummins QSB engine the Scarab M6 & FS6000 provides quiet, efficient sweeping by virtue of a fluid drive system and can be mounted on chassis from 12 to 18 tonnes G.V.W.

Controlled by Scarab's proven CANbus system, the M6 & FS6000 offers an intuitive and colour-coded control panel with self-diagnostic features and comprehensive data-logging of sweeping information.

**AUXILIARY POWER UNIT:** The Cummins QSB3.3 Stage IIIA with High-Pressure Common Rail (HPCR) diesel fuel system provides **74 kW @ 2200 rpm, 412 Nm @ 1400 rpm** and is coupled to Scarab's proven fluid drive system to power all sweeping functions. This approach effectively simplifies the sweeping system, eliminating the need for complex drive belts and gearboxes. The auxiliary engine is supplied by a dedicated fuel tank of **120 litres** capacity.

**HOPPER:** The **6.35 m<sup>3</sup>** gross volume hopper has 4 mm thick floor and sides and is manufactured entirely from corrosion and abrasion resistant stainless steel for excellent durability.

The hopper is raised and lowered by a two-stage tipping ram, facilitating rapid load discharge at a maximum angle of 55°. The tipping function is controlled by a lever-operated valve located on the side of the vehicle.

The suction inlet tubes are fitted with automatic blanking flaps and the large **1.5 m<sup>2</sup>** suction filter screen hinges down to ease cleaning.

The rear door locking mechanism incorporates three clamping points, to ensure a watertight seal, and a drain-off point to facilitate load de-watering. Operation of the rear door is controlled by a lever-operated valve located on the side of the vehicle.

Two large compartments with hinged doors, one either side of the hopper, provide storage for bulky items.

**WATER TANK:** The **1250 litre** corrosion resistant water tank is constructed from Glass Reinforced Plastic (GRP) and is mounted beneath the hopper on flexible mounts. Filling is achieved by means of a hydrant connection, with regulation siphon break, or by means of a hosepipe and bespoke adaptor. The tank is fitted with a sight-glass / level indicator and suction strainer.

**SUCTION FAN:** The dynamically balanced **900 mm diameter** suction fan is mounted in the hopper top. It is powered by a variable load-sensing pump to give **2100 rpm**, providing the highest performance and efficiency while minimizing noise. The highly efficient multi-blade centrifugal impellor provide a nominal airflow of **6000 ft<sup>3</sup>/min (170 m<sup>3</sup>/min)**.

**SUCTION NOZZLE:** Of all-steel construction, the **740 mm** wide suction nozzle is mounted in a trailed frame running on **250 mm** diameter, rubber tyred wheels. The nozzle head is fitted with adjustable rubber flaps and a skid plate is fitted to prevent impact damage. The nozzle frame incorporates a pneumatically operated tilting mechanism, enabling the nozzle to accommodate large objects with ease and a large, **250 mm** diameter, suction hose to minimize the possibility of blockages. Nozzle flap ground clearance is between **25–30 mm** resulting in a long flap life and less need for adjustment.

Four manually-adjustable water jets are fitted to the nozzle at 90° intervals to provide an internal dust suppression spray. Additional water jets, mounted around the suction inlet tube, are available as an additional option for working in exceptionally dusty conditions.

**SIDE BRUSH:** **650 mm** diameter steel-tined brush with direct drive hydraulic motor. The brush is fully adjustable for angle and is fitted in a trailed linkage with kick-back protection with a pneumatic ram for IN/OUT control. Brush speed can be manually adjusted from **0 to 125rpm** from within the services cabinet.

A work light, activated from the cab mounted control panel, is fitted to assist when operating in low light conditions.

The brush can be specified with optional down-pressure control (refer to options list).

Standard brushes are as specified above, however, it may be necessary to substitute with a **500 mm** diameter side brush when chassis dimensions dictate.

(Please note that sweep widths will be affected accordingly)

**WIDE SWEEP:** The **400 mm** diameter brush consists of replaceable polypropylene segments and is powered by a direct-drive hydraulic motor. It is fully-floating with shock absorbers to prevent bounce and is fitted in a trailed linkage to ensure parallel, even brush wear.

Brush speed can be manually adjusted from **0 to 125 rpm** from within the services cabinet.

The brush can be specified with optional down-pressure control (refer to options list).

Standard brush is as specified above however it may be necessary to substitute this with a **320 mm** diameter widesweep brush when chassis dimensions and height dictate.

**WATER PUMP:** A self-priming twin-diaphragm pump fitted with suction filter and driven by a direct-drive hydraulic motor, supplies water to the brushes and suction nozzles via solenoid valves operated from the cab-mounted control panel.

**HYDRAULIC SYSTEM:** The hydraulic system comprises an axial piston pump, with automatic control of output pressure, to drive the suction fan and two gear pumps which provide working pressure for all other hydraulic services. The system is piped in zinc plated steel tubing where practical and is protected by 10 micron filters to ensure long service life. The system is cooled via a heat exchanger and engine-driven, high-performance fan ensuring optimum cooling under high ambient temperatures and the most arduous operating conditions.

The hydraulic tank has a capacity of 40 litres and is fitted with a sight-glass and automatic low oil level shut-off. The hydraulic control valves are located for easy access and servicing in a protected services cabinet.

**PNEUMATIC SYSTEM:** The pneumatic system is supplied by the chassis auxiliary air supply and is fitted with a pressure regulator and filter/water separator. The system controls the following services:

Side Brush IN/OUT

Suction Nozzle LIFT/LOWER and TILT functions

Widesweep LIFT/LOWER

Blanking Flaps OPEN/CLOSE.

The pneumatic control valves are located for easy servicing in a protected services cabinet and are activated from the cab-mounted control panel.

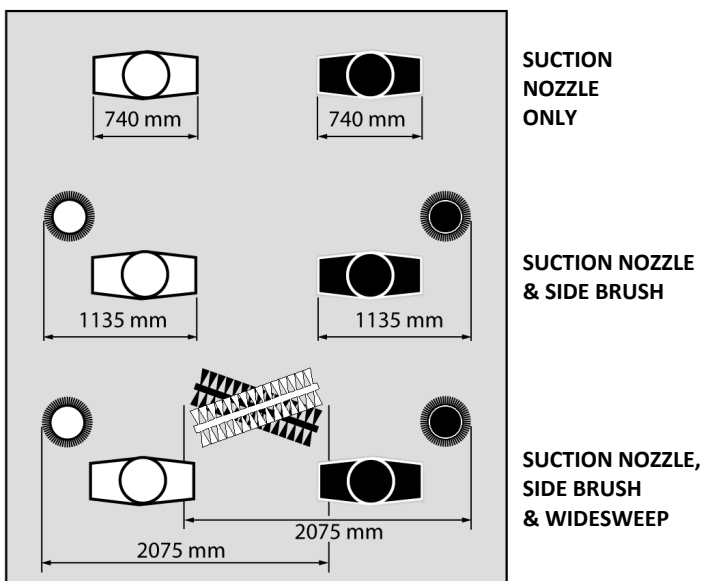
**CANbus CONTROL PANEL:** Scarab's proven CANbus system controls the operation of the sweeping functions from an ergonomically designed panel and display screen. The panel switches are colour coded and clearly marked with intuitive icons for ease of operation. The panel's compact size enables easy fitment adjacent to the driver's seat. CANbus incorporates self-diagnostic checking and a range of sweep-data logging features. The display screen is capable of displaying in a variety of languages to suit country of destination.

**PAINTING:** Two pack system of single colour with optional multi-colour and signwriting.

**STANDARD EQUIPMENT:** Standard equipment includes single sweep configuration on either the left or right hand side of the machine; comprising side brush, suction nozzle, auto-blanking flap, fixed widesweep brush, single work light and single beacon to the hopper.

Each M6 & FS6000 kit is supplied with Installation & Commissioning Guidelines, Operator's Manual and an Illustrated Parts Catalogue.

**SWEEPING WIDTHS:**



This diagram shows the sweeping equipment configuration for right hand drive / sweep vehicles (in black), left hand drive / sweep vehicles (in white), arranged in the opposite configuration and dual sweep vehicles with swivelling widesweep

The suction nozzle, side brush and wide sweep brush can be raised or lowered independently of each other to provide various sweeping patterns to suit differing road conditions.

## OPTIONAL EQUIPMENT:

**DUAL SWEEP** - Comprising opposite hand side brush, suction nozzle, auto-blanking flap, work light and swivelling widesweep.

**HIGH-PRESSURE / HIGH-VOLUME WATER PUMP** - Comprising either a **42 litres per minute / 50 bar** water pump or a **32 litres per minute / 200 bar water pump**, complete with automatically retracting hose reel with 13 metres of hose and fitted with a trigger operated hand lance.

A front-mounted stainless steel spray bar with 11 nozzles covering an area 2 metres wide. The system is protected by a 'low water level' cut-out to prevent damage.

**REAR MOUNTED SUCTION BOOM** - Comprising **3 metre long 200 mm diameter** flexible hose with 1 metre long steel end, supported on a swinging arm. Suction entry into rear is opened via a manual lever on rear door. Hose is stowed in on back door when not in use.

Boom operates through an arc of **210°** and can be mounted on the left or right hand side of the machine.

**SIDE BRUSH AND WIDESWEEP PRESSURE** - Comprising pneumatic pressure to side brush / brushes and widesweep to allow the operator to increase ground pressure for heavy or compacted road debris. This system is switched from the cab mounted control panel. Pressure level can be adjusted manually from within the services cabinet. This option can be specified in single or dual sweep configuration.

**ADDITIONAL WATER SPRAYS** - Comprising additional water sprays mounted in suction tube to apply increased water. This option can also be specified on left hand and/or right hand side brush

## CHASSIS SUITABILITY:

The M6 & FS6000 can be mounted on a range of internationally available chassis. For details of suitable chassis specifications please contact the Sales Department.

**Scarab are dedicated to continuous product development and as such we reserve the right to change this specification without prior notice.  
To ensure latest information contact Sales Department.**



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