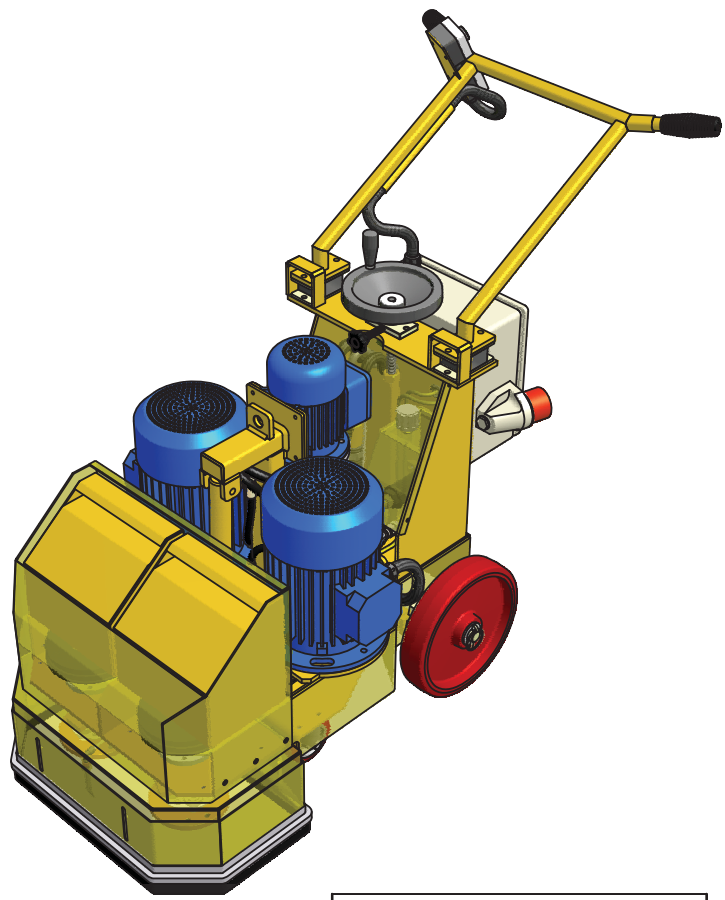






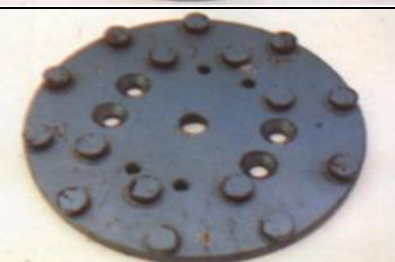
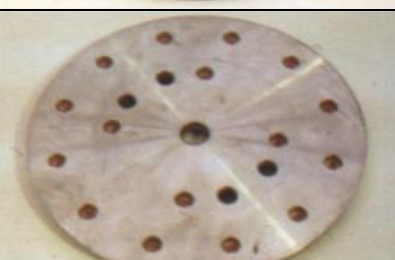
DFG500-2
Twin Speed
Diamond Floor Grinder
Operating Manual



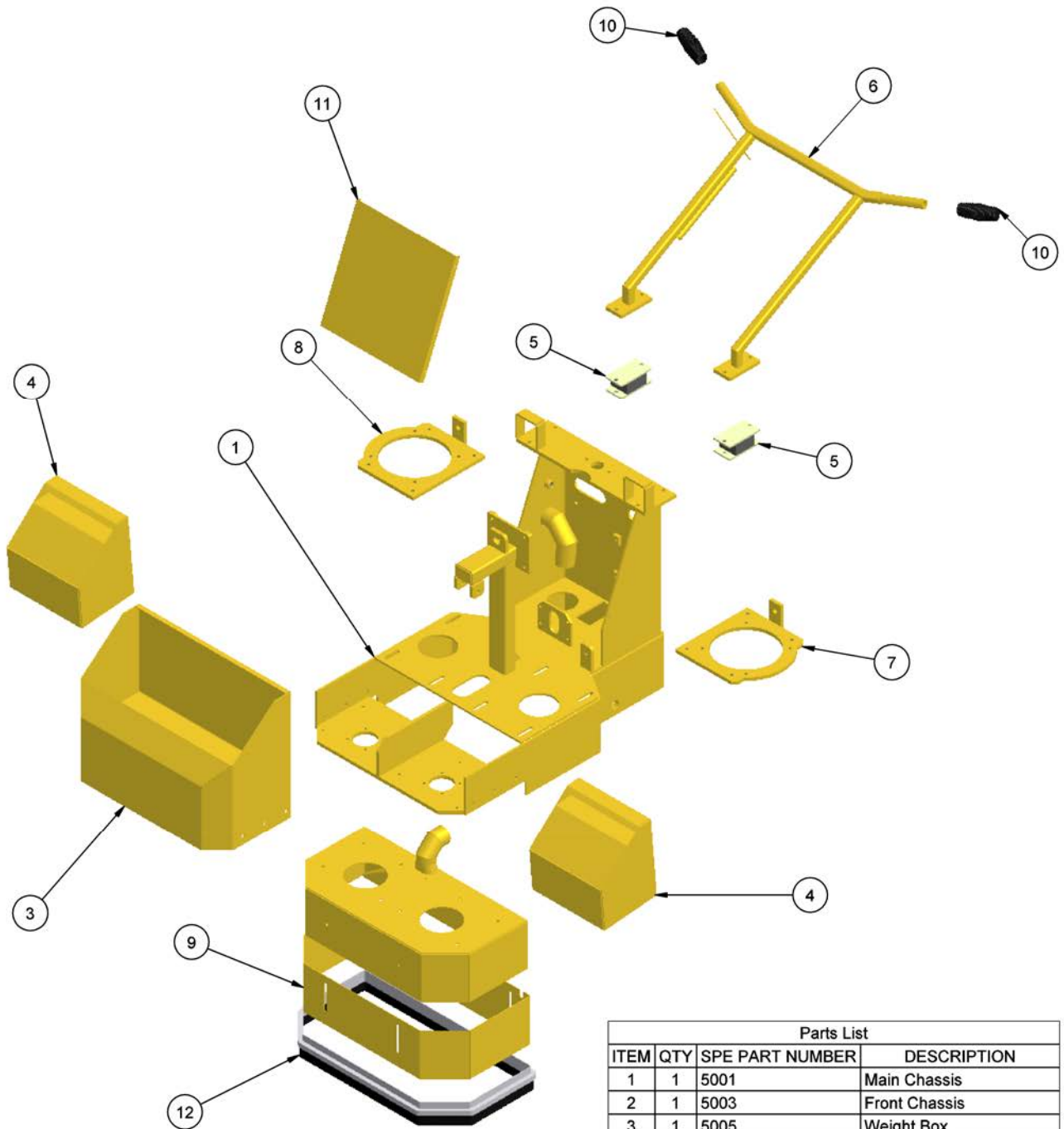


| | |
|---|---|
|  Surface Preparation Equipment™ | <small>SPE International Limited Horseshill Lane, Quakenbush Lincoln, L42 8LJ, England Tel: +44 (0) 1522 885 700 or +44 (0) 1522 885 530 Fax: +44 (0) 1522 881 110 Web Site: http://www.spe-uk.com E-mail: sales@spe-uk.com</small> |
| | DFG 500 |

Accessories

| | Part No | Description | Application |
|---|-------------|---|--|
|  | 6401 | Economy grade 250mm 10 segment (blue) | Economical removal of most types of adhesives and surface contaminants. Excellent for using on rougher surfaces as a first grind. Can be used wet or dry. |
|  | 6402 | Super Aggressive 250mm 10 segment (red) | Designed for the removal of S/L and epoxy coatings in a commercially viable way. Can be used for the majority of aggressive grinding applications and will give extended wear on heads. Can be used wet or dry. |
|  | 6403 | Standard Grade 250mm 16 segment (blue) | Removal and grinding of most types of concrete floor in preparing for follow on coatings. General all purpose head for most grinding works. Can be used wet or dry. |
|  | 6404 | High performance 250mm 20 segment (blue) | Fast removal and grinding of most types of plain and painted concrete floors. Will key floors for coatings, removal of high spots, lip edges etc. Suitable for first and second stage grinding to terrazzo and aggregated seamless floors. Can be used wet or dry. |
|  | 6405 | Button head 250mm 16 segment (blue) | For the removal of the thicker adhesive on sand / cement screed whether open or closed. Will cope with large volume areas in a cost effective manner. To be used with softer elastomeric and thin film coatings. |
|  | 6408 | Polymer diamond backing plate | Backing drive plate for the polymer diamond system. Takes 16 polymer button inserts. |

| | | | |
|---|---|--|--|
|  | <p>6420 6409 6410 6411 6412 6413 6414</p> | <p>GREEN ULTRA COARSE 16no BLACK EXTRA COARSE 16no BROWN COARSE 16no RED MEDIUM 16no YELLOW FINE 16no WHITE EXTRA FINE 16no BLUE ULTRA FINE 16no</p> | <p>Polymer diamond system to be used only on the DFG 500 twin speed (slow speed option) for second stage grinding and polishing of terrazzo, stone and marble etc. The buttons fit securely into the aluminium backing plate. Wet use only.</p> |
|  | <p>6422 6423</p> | <p>COARSE STEEL POLYMER 16No MEDIUM STEEL POLYMER 16No</p> | <p>Steel polymer diamond system to be used on DFG 500 twin speed (slow speed option). For second stage grinding and finishing of cementitious, polyurethane and epoxy based terrazzo, terrazzo tiles and concrete flooring. Provides rapid action and long life. Wet use only.</p> |
|  | <p>6403C</p> | <p>Fine grit 250mm 16 segment (purple)</p> | <p>Finishing and polishing of cementitious polyurathane, epoxy based terrazzo, terrazzo tiles and decorative aggregated concrete flooring. Can be used wet or dry.</p> |
|  | <p>6415</p> | <p>Carborundum grinding and wire brush block holder drive plate.</p> | <p>Drive plate for the carborundum grinding blocks and wire brush blocks.</p> |
|  | <p>6416 6417 6418</p> | <p>Carborundum grinding blocks Fine Medium Coarse</p> | <p>For economical polishing and grinding removal of high spots, over watered slabs, rain damaged slabs, lip edges etc.</p> |
|  | <p>6419 6421</p> | <p>16 gauge round wire block Spring steel block</p> | <p>General scuffing, removal of rubber carpet backing, grease and oil build-up without damage to substrate.</p> |



| Parts List | | | |
|------------|-----|-----------------|--------------------------|
| ITEM | QTY | SPE PART NUMBER | DESCRIPTION |
| 1 | 1 | 5001 | Main Chassis |
| 2 | 1 | 5003 | Front Chassis |
| 3 | 1 | 5005 | Weight Box |
| 4 | 2 | 5006 | Weight |
| 5 | 2 | 5017 | Flexible Mounting |
| 6 | 1 | 5016 | Handlebar |
| 7 | 1 | 5008-L/H | L/H Motor Mounting Plate |
| 8 | 1 | 5008-R/H | R/H Motor Mounting Plate |
| 9 | 1 | 5004 | Adjustable Panel |
| 10 | 2 | 9104 | Handlebar Grip |
| 11 | 1 | 5002 | Panel |
| 12 | 1 | 5064 | Sealing Brush (Set) |

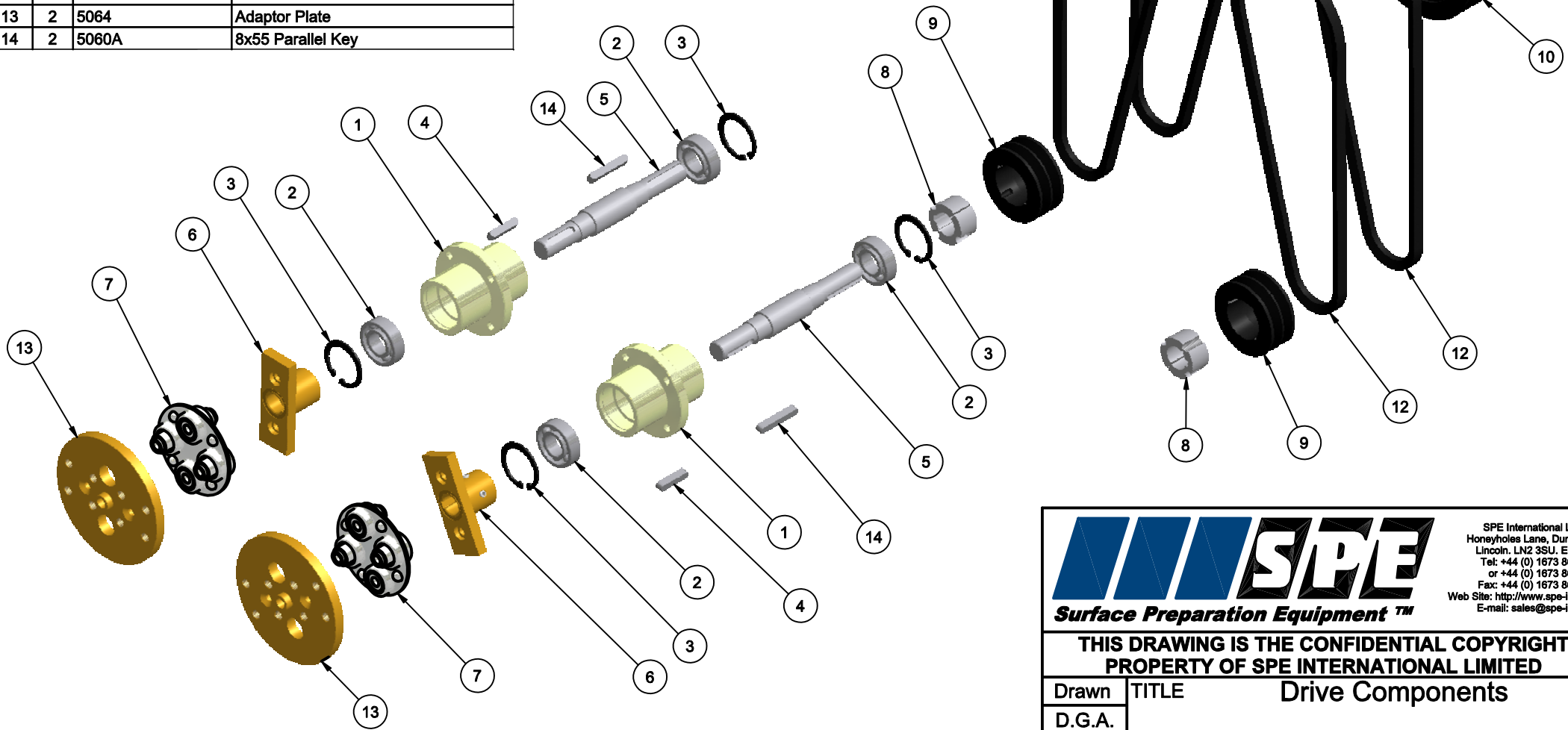


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| | | | |
|-----------|----------------|-----------|-----------------|
| Drawn | TITLE | | Body Components |
| D.G.A. | | | |
| Checked | Drawing No. | MACHINE | |
| B.J./P.A. | DFG-500_Bdy-02 | DFG 500-2 | |

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| Parts List | | | |
|------------|-----|-----------------|-------------------------------|
| ITEM | QTY | SPE PART NUMBER | DESCRIPTION |
| 1 | 2 | 5057 | Bearing Housing |
| 2 | 4 | 5058 | Bearing |
| 3 | 4 | 5059 | Int. Circlip |
| 4 | 2 | 5061 | 8x40 Parallel Key |
| 5 | 2 | 5060 | Shaft |
| 6 | 2 | 5062 | Connector |
| 7 | 2 | 5063 | Flexi Coupling |
| 8 | 2 | 08037 | Taper Lock Bush [1210 - 28mm] |
| 9 | 2 | 08029 | Drive Pulley |
| 10 | 2 | 5055 | Driven Pulley |
| 11 | 2 | 5056 | Taper Lock Bush [2012 - 24mm] |
| 12 | 4 | 5054 | Drive Belt |
| 13 | 2 | 5064 | Adaptor Plate |
| 14 | 2 | 5060A | 8x55 Parallel Key |



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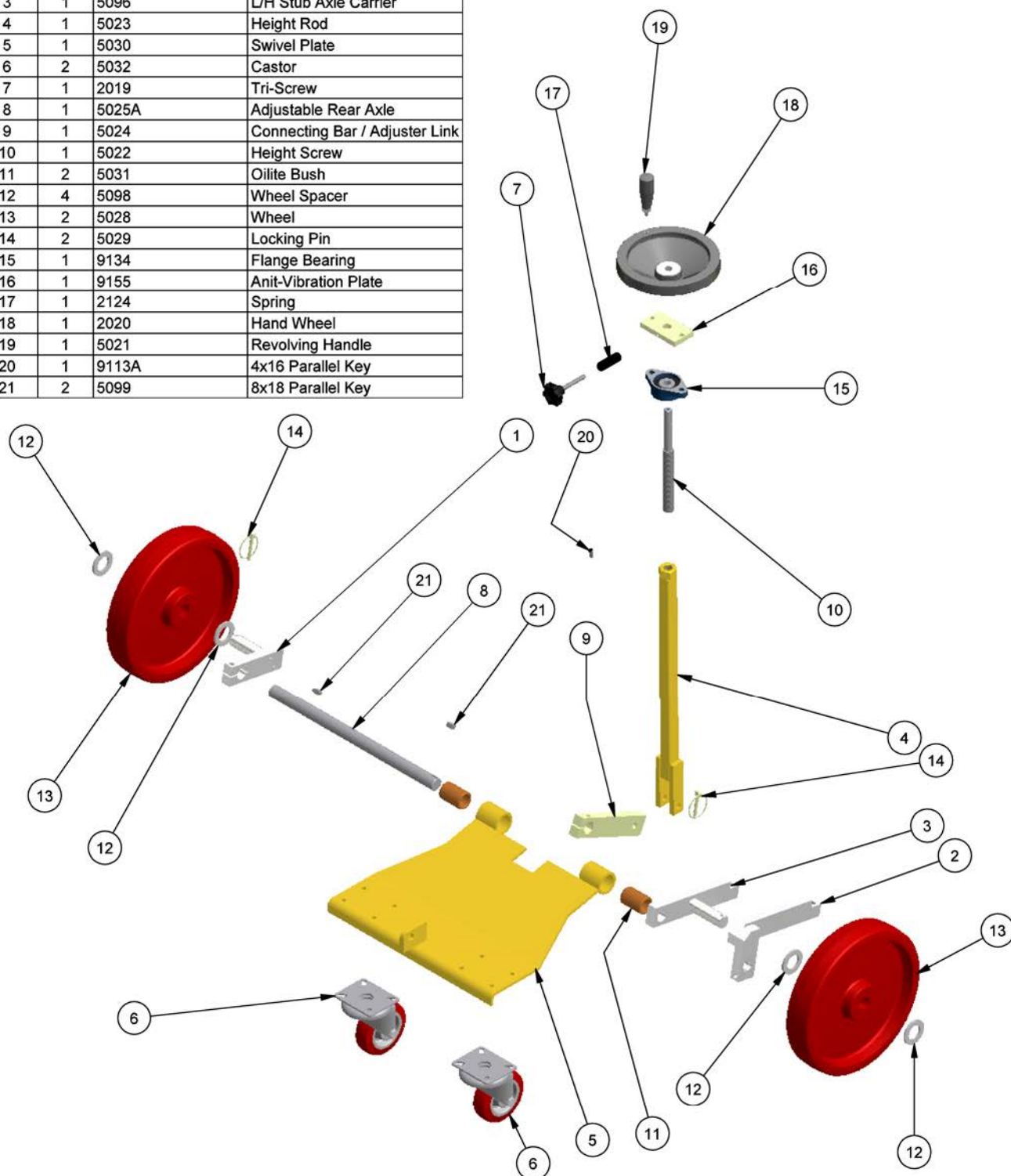


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| | | | |
|-----------|----------------|--|------------------|
| Drawn | TITLE | | Drive Components |
| D.G.A. | | | |
| Checked | Drawing No. | | MACHINE |
| B.J./P.A. | DFG-500_Drv-02 | | DFG 500-2 |

| Parts List | | | |
|------------|-----|-----------------|--------------------------------|
| ITEM | QTY | SPE PART NUMBER | DESCRIPTION |
| 1 | 1 | 5097 | R/H Stub Axle |
| 2 | 1 | 5095 | L/H Stub Axle Adjuster |
| 3 | 1 | 5096 | L/H Stub Axle Carrier |
| 4 | 1 | 5023 | Height Rod |
| 5 | 1 | 5030 | Swivel Plate |
| 6 | 2 | 5032 | Castor |
| 7 | 1 | 2019 | Tri-Screw |
| 8 | 1 | 5025A | Adjustable Rear Axle |
| 9 | 1 | 5024 | Connecting Bar / Adjuster Link |
| 10 | 1 | 5022 | Height Screw |
| 11 | 2 | 5031 | Oilite Bush |
| 12 | 4 | 5098 | Wheel Spacer |
| 13 | 2 | 5028 | Wheel |
| 14 | 2 | 5029 | Locking Pin |
| 15 | 1 | 9134 | Flange Bearing |
| 16 | 1 | 9155 | Anit-Vibration Plate |
| 17 | 1 | 2124 | Spring |
| 18 | 1 | 2020 | Hand Wheel |
| 19 | 1 | 5021 | Revolving Handle |
| 20 | 1 | 9113A | 4x16 Parallel Key |
| 21 | 2 | 5099 | 8x18 Parallel Key |

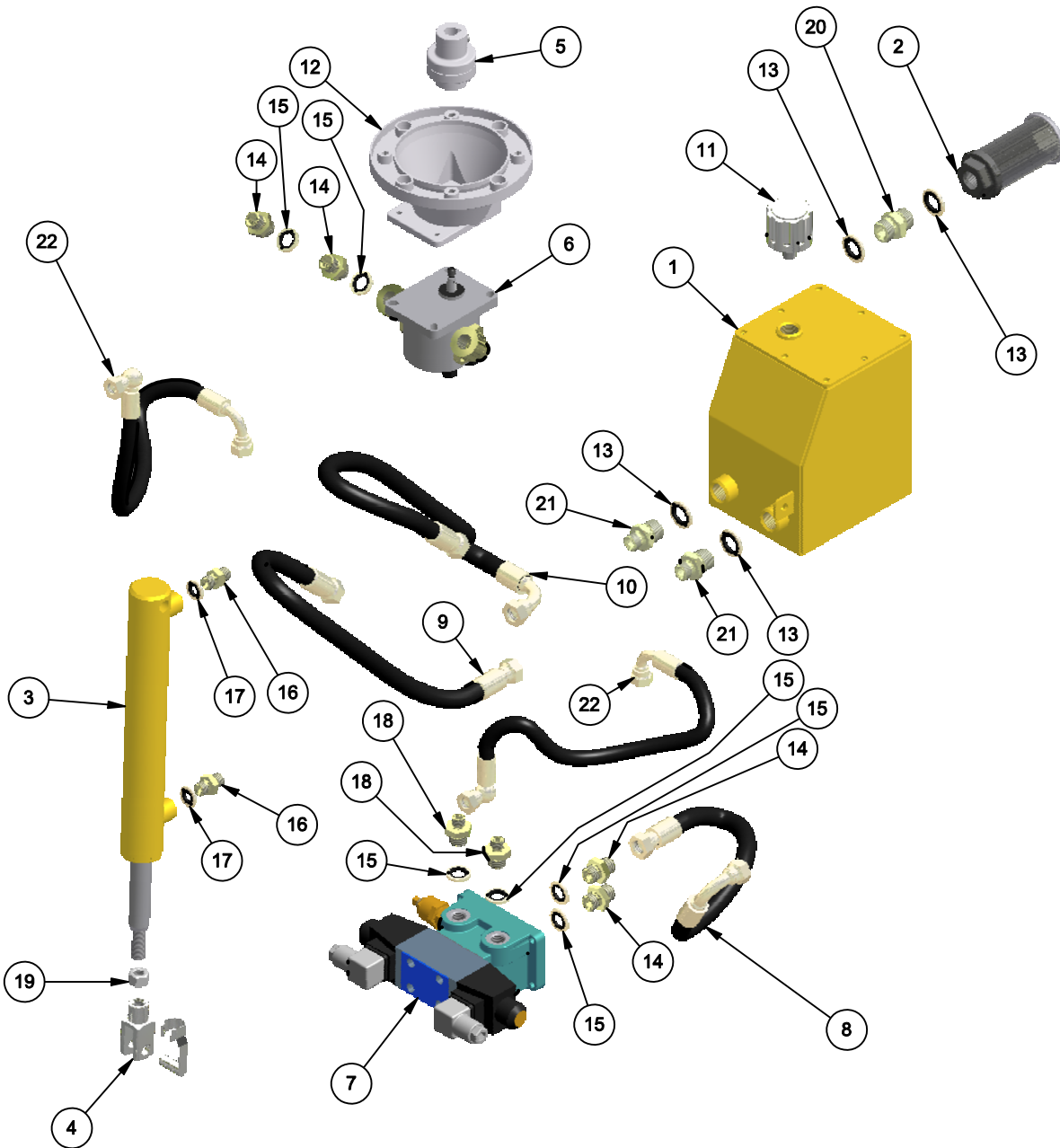


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| | | |
|-----------|--------------------------------|-----------|
| Drawn | TITLE Undercarriage Components | |
| D.G.A. | | |
| Checked | Drawing No. | MACHINE |
| B.J./P.A. | DFG-500_Unc-02 | DFG 500-2 |

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| Parts List | | | |
|------------|-----|-----------------|-------------------------------|
| ITEM | QTY | SPE PART NUMBER | DESCRIPTION |
| 1 | 1 | 5033 | Hydraulic Oil Tank |
| 2 | 1 | 3036 | ½" Tank Filter |
| 3 | 1 | 5041 | Cylinder |
| 4 | 1 | 9122 | Clevis Assembly |
| 5 | 1 | 5047 | Flexi-Coupling |
| 6 | 1 | 5050 | Pump |
| 7 | 1 | 5039 | Solenoid Valve |
| 8 | 1 | 5043 | Hose (Tank to Sol. Valve) |
| 9 | 1 | 5036 | Hose (Tank to Pump) |
| 10 | 1 | 5038 | Hose (Pump to Sol. Valve) |
| 11 | 1 | 5034 | Filler Cap |
| 12 | 1 | 5048 | Bell Housing |
| 13 | 4 | DW 08 | ½" Dowty Washer |
| 14 | 4 | ADAPT 002 | ⅜" m-m Hyd. Adaptor |
| 15 | 6 | DW 06 | ⅜" Dowty Washer |
| 16 | 2 | 5042 | ¼" Flow Restrictor |
| 17 | 2 | DW 04 | ¼" Dowty Washer |
| 18 | 2 | ADAPT 006 | ¼"x⅜" m-m Hyd. Adaptor |
| 19 | 1 | NUT 001 | Hex Nut |
| 20 | 1 | ADAPT 003 | ½" m-m Hyd. Adaptor |
| 21 | 2 | ADAPT 010 | ⅜"x½" m-m Hyd. Adaptor |
| 22 | 2 | 5040 | Hose (Sol. Valve to Cylinder) |

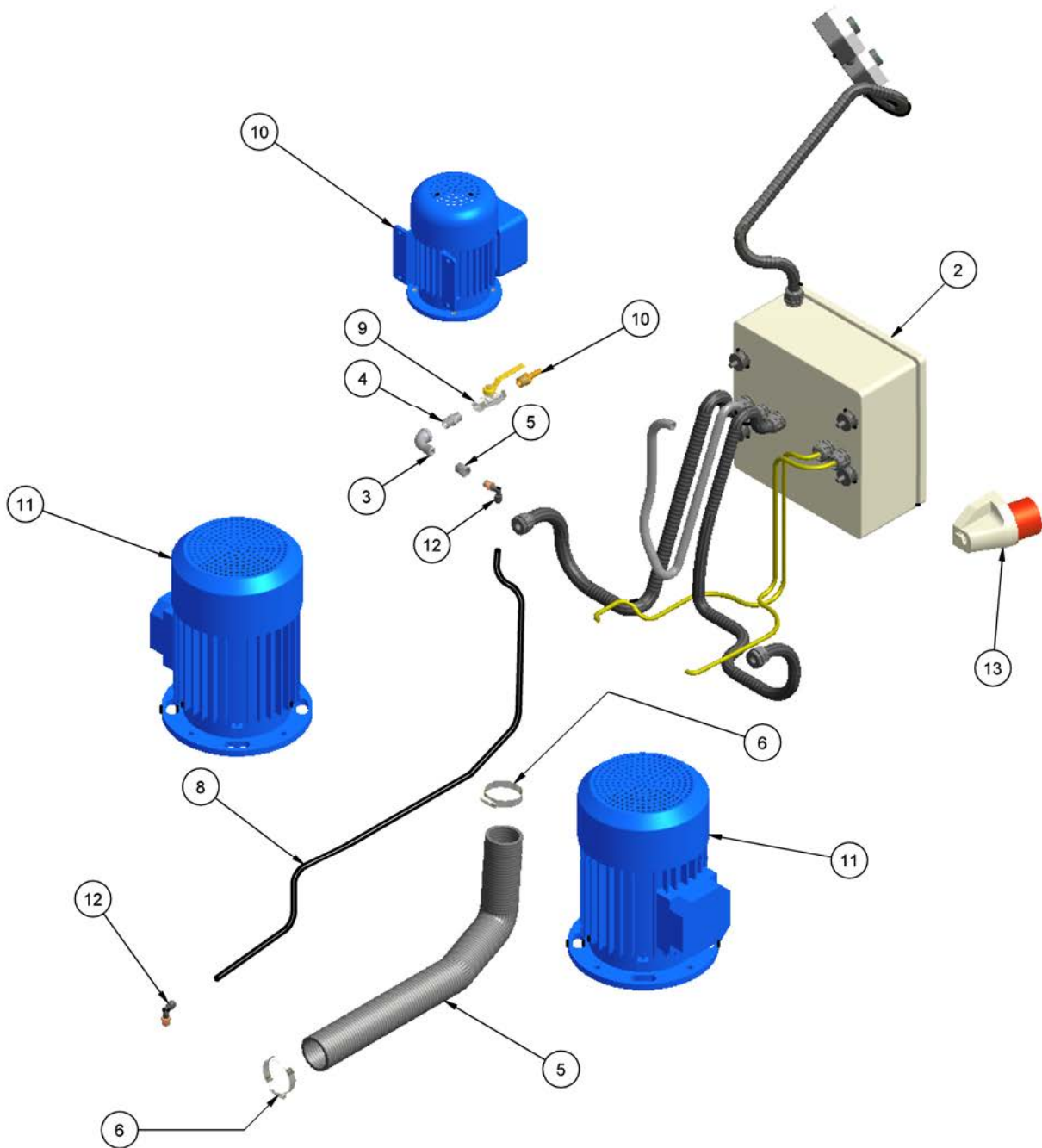


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| | | | |
|-----------|----------------|-----------|----------------------|
| Drawn | TITLE | | Hydraulic Components |
| D.G.A. | | | |
| Checked | Drawing No. | MACHINE | |
| B.J./P.A. | DFG-500_Hyd-02 | DFG 500-2 | |

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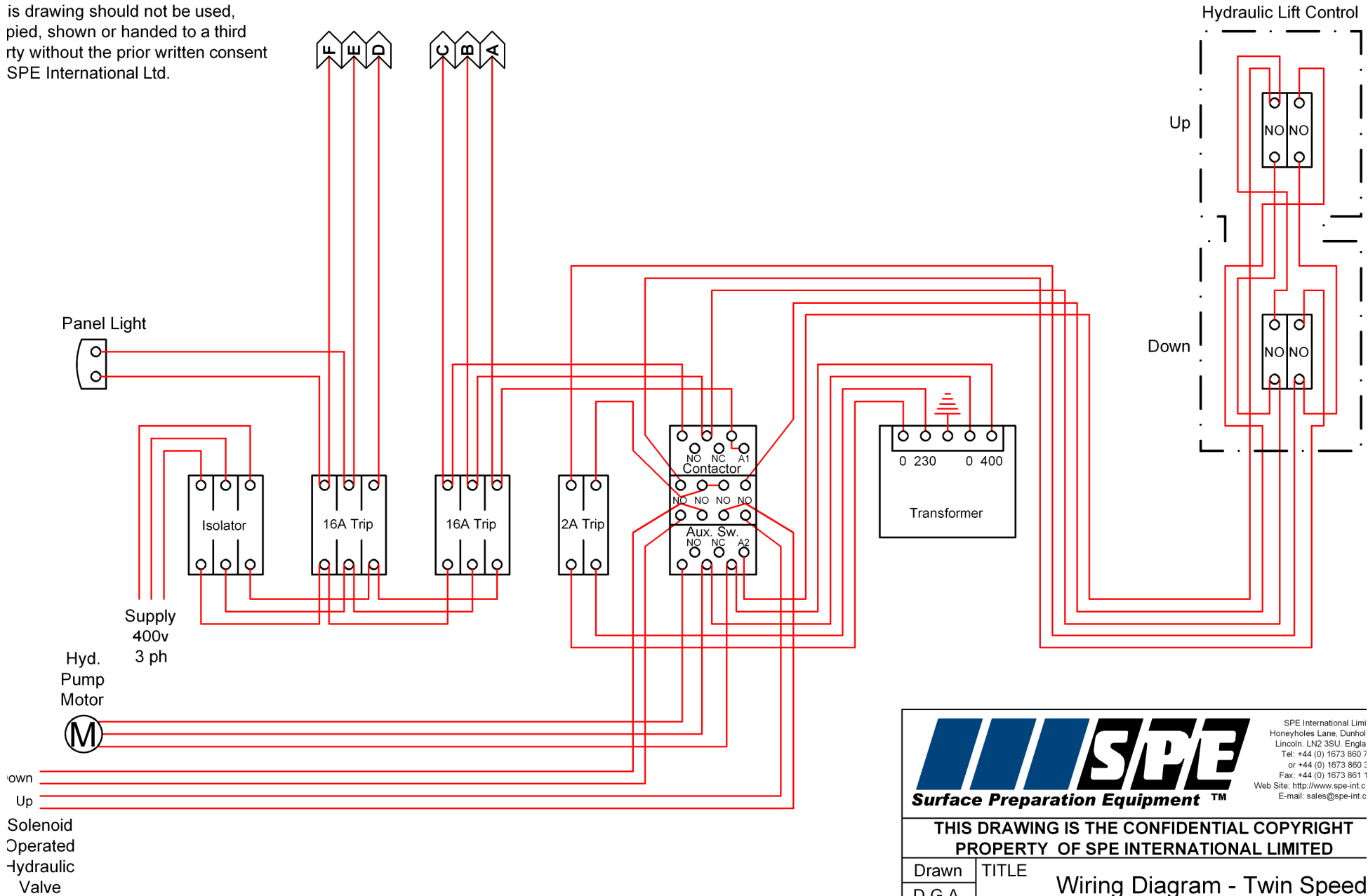
| Parts List | | | |
|------------|-----|-----------------|--------------------------------|
| ITEM | QTY | SPE PART NUMBER | DESCRIPTION |
| 1 | 1 | ADAPT 054 | M-F Elbow |
| 2 | 1 | ADAPT 051 | 3/8" Hexagonal Nipple |
| 3 | 1 | ADAPT 056 | Reducing Bush |
| 4 | 2 | 10078 | 1/4" Connector |
| 5 | 1 | 5009 | Vacuum Hose |
| 6 | 2 | HC-60 | Hose Clip |
| 7 | 1 | 5015 | Semi-Rigid Pipe |
| 8 | 1 | 5011 | Ball Valve |
| 9 | 1 | 5100 | 3/8" Hose Tail |
| 10 | 1 | 5049 | Motor (Hyd. Pump) |
| 11 | 1 | 5020 B | Electric Panel Assembly |
| 12 | 2 | 5051A | Drive Motor |
| 13 | 1 | SP630-304 | Surface Mounted Plug (3Ph/Rev) |

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| Drawn | TITLE Elect., Vac. & Water Components | |
| D.G.A. | | |
| Checked | Drawing No. | MACHINE |
| B.J./P.A. | DFG-500_EVW-02 | DFG 500-2 |

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| | | |
|---------|-----------------------------|----------|
| Drawn | TITLE | |
| D.G.A. | Wiring Diagram - Twin Speed | |
| Checked | Drawing No. | Machine |
| D.G. | DFG-500-2_Elec-02 | DFG 500- |



DFG500 TWIN SPEED

ELECTRICAL COMPONENTS

| QTY | DESCRIPTION | SPE PART NO |
|-----|---------------------------------------|-------------|
| 1 | Panel | SP58017 |
| 1 | Back Panel | SP55817 |
| 7 | Contactor | - |
| 1 | Aux Switch | SPLADN40 |
| 2 | Overload | SPLRD12 |
| 2 | Overload | SPLRD16 |
| 1 | Stop Switch | SPZB4BZ102 |
| 2 | Start Switch | SPZB4BZ101 |
| 2 | Start Button | SPZB4BA3 |
| 1 | Stop Button | SPZB4BS44 |
| 1 | Lens | SPZB4BV04 |
| 1 | Panel Lamp | SPZB4BV5 |
| 2 | Switch Box | SPXALBO1 |
| 4 | Contact Switches | SPXENL1111 |
| 2 | Start Button | SPZA2BA3 |
| 2 | Trip | SPC60HD316 |
| 1 | Trip | SPC60HD304 |
| 1 | Trip | SPC60HC202 |
| 2 | Glands | - |
| 3 | Brass Bushes | - |
| 1 | Coupler | - |
| 4 | Glands | 9258/200 |
| 1 | Glands | - |
| 1 | Isolator | SPFWA4/3C |
| 1 | Transformer | 5020A |
| 1 | 32amp 5Pin Phase Rev. surface Plug | SP630PH |
| 4 | Bobbins | 9245/500 |
| 1 | 700/400 R.P.M. Sticker | - |
| 2 | Conversion Kit | - |
| 1 | Two Speed Switch | - |
| 1 | N/O X N/C Contact Block | - |
| 1 | N/O Contact | - |
| 1 | N/C Contact | - |



| |
|---------------------------------------|
| DFG500 - 2 Operating Manual |
|---------------------------------------|

SPECIFICATION SHEET

| | |
|----------------------------------|---|
| Type | DFG 500 Electric |
| Part number | DFG 500-2 |
| Power output | 2 x 4.5 kw on high speed 2 x 3.2 kw on slow speed |
| Voltage | 380/415 |
| Cycles | 50 |
| Head speed r.p.m. | 700/1400 |
| Engine/motor speed r.p.m. | 1400/2800 |
| Machine dimensions (mm) | |
| Length | 1400 |
| Width | 725 |
| Height | 1100 |
| Weight (kg) | 300 |
| Ballast weight (kg) | 2 x 20 |
| Hydraulic oil | HM46 |
| Tank capacity | 3.5 litres |

ELECTRICAL REQUIREMENTS

| Machine | Volts | Plug size | Cable size (mm) | Max Cable Length | Transformer | Generator |
|----------------|--------------|------------------|------------------------|-------------------------|--------------------|------------------|
| DFG 500-2 | 380/415 | 32 amp 5 pin | 4.0 4 core | 75 metres | - | 20 kva |

RECORD OF NOISE AND VIBRATION ASSESSMENT

Manufacturer: SPE
 Type: Diamond Floor Grinder
 Model No. DFG500-2 Electric
 Operation : Concrete floor surface
 Inserted Tool: 2 Diamond Grinding Plates
 Running Conditions: 1400 rpm
 HAV Note: Acoustic Associates

HAND-ARM VIBRATION

Frequency Weighted Energy Equivalent Accelerations ($a_{h,w}$)

| Measurement Position | Acceleration (m/s^2) | | | |
|----------------------|--------------------------|--------|--------|------------|
| | X axis | Y axis | Z axis | Vector Sum |
| Handle | 1.31 | 1.14 | 1.31 | 2.18 |

NOISE LEVELS

Sound Power Level (L_{WA})

| L_{WA} at Octave Band Centre Frequency (Hz) | | | | | | | | Sound Power Level L_{WA} |
|---|------|------|------|------|------|------|------|----------------------------|
| 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| 61.5 | 80.6 | 88.4 | 94.3 | 93.3 | 92.2 | 85.9 | 73.9 | 98.8 |

Operator's Ear

| $L_{Aeq,T}$ at Octave Band Centre Frequency (Hz) | | | | | | | | Overall Level ($L_{Aeq,T}$) | L_{Peak} dB(C) |
|--|------|------|------|------|------|------|------|-------------------------------|------------------|
| 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| 46.2 | 66.3 | 76.1 | 81.8 | 81.2 | 75 | 68.5 | 56.6 | 85.6 | 101 |

