



Parts Manual

Mfg. No: 5901962
FB3000 Hurricane Series Stand-On
Debris Blower



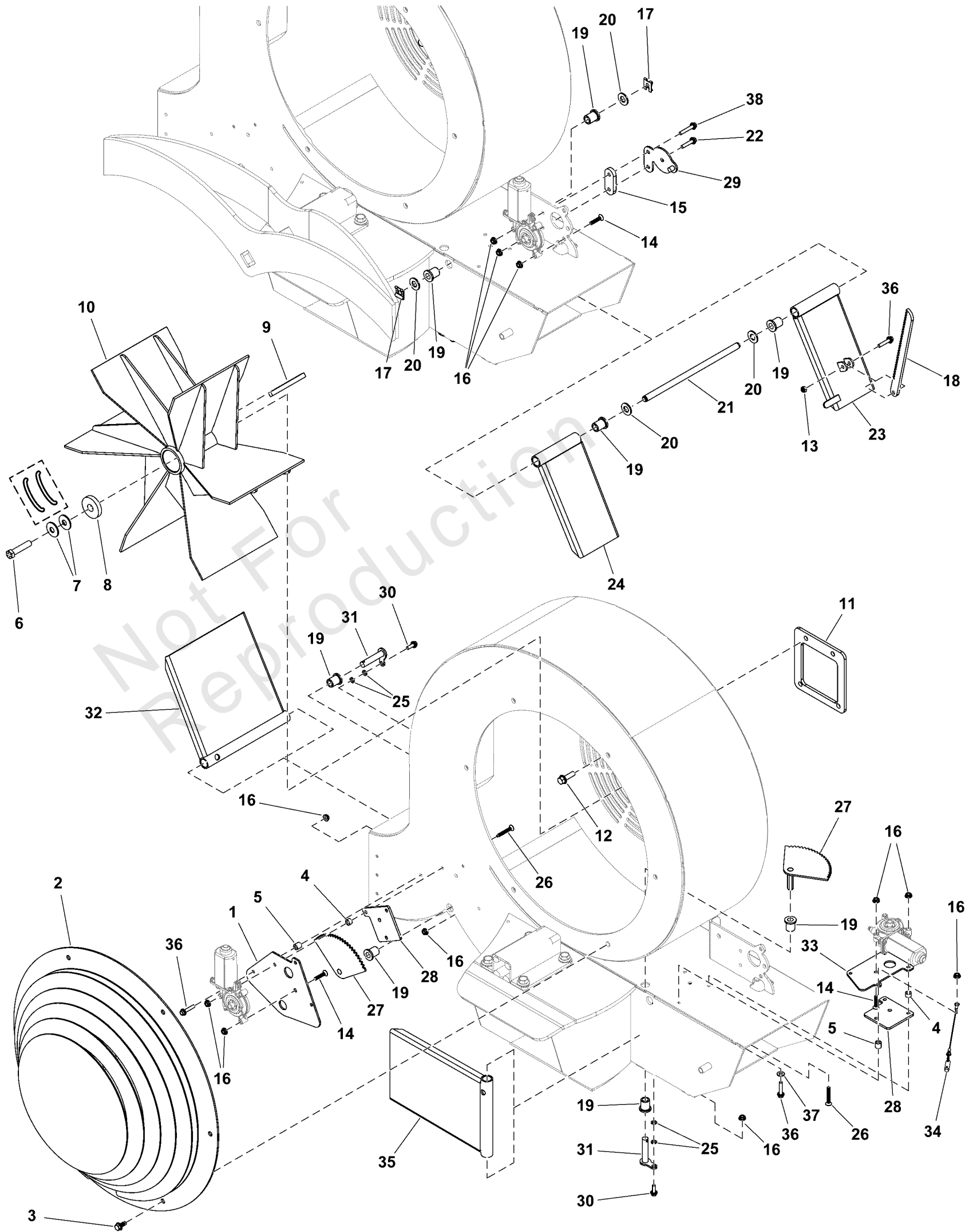
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Not For
Reproduction

Blower Group

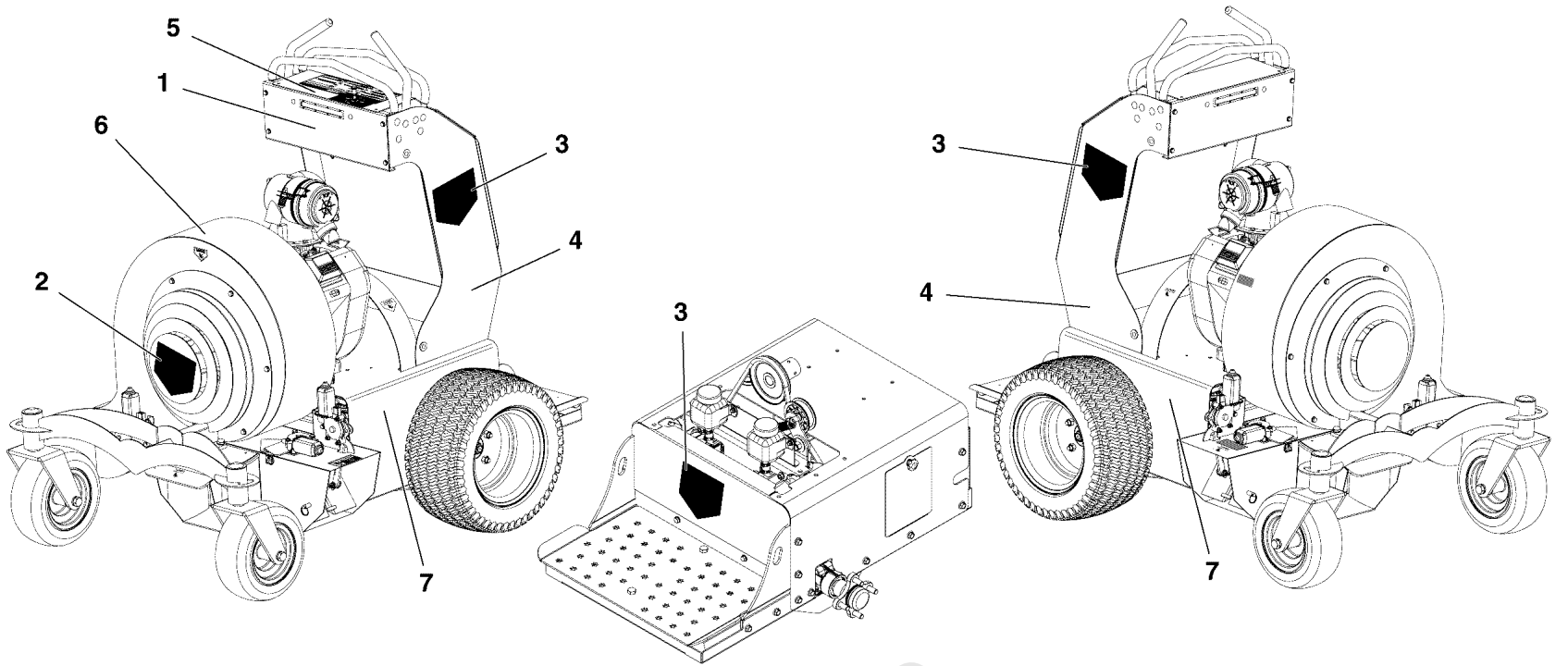
Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901962

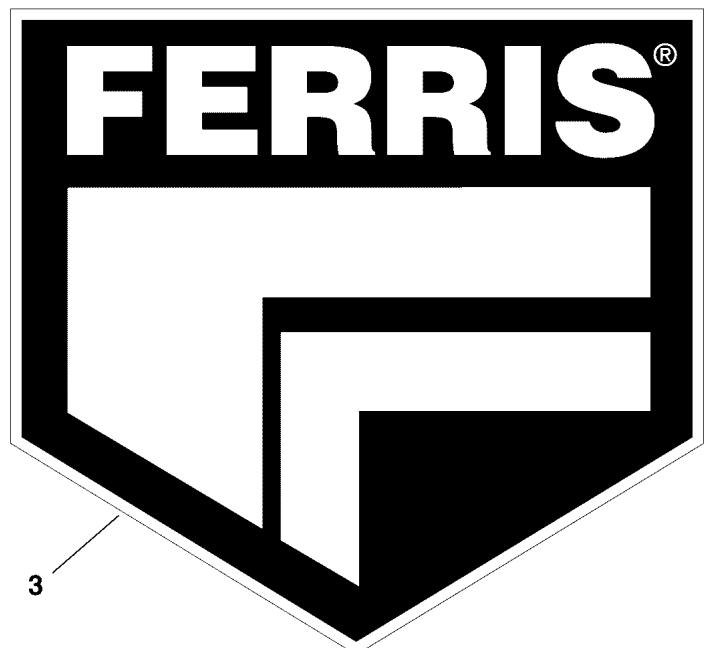
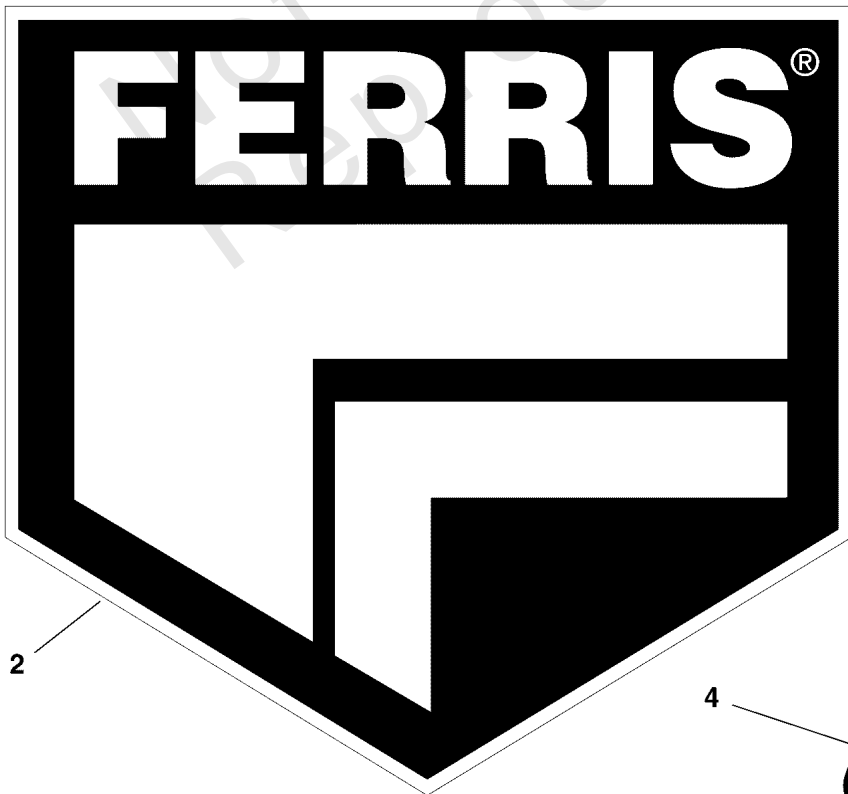


Blower Group

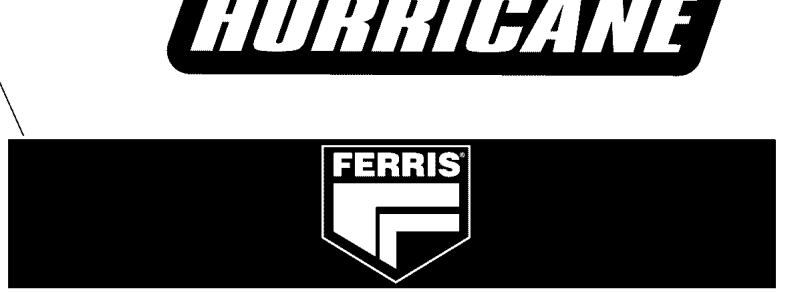
| REF NO | PART NO | QTY | DESCRIPTION |
|--------|-----------|-----|---|
| 1 | 5107338A | 1 | PLATE, RIGHT DEFLECTOR COVER - BLK |
| 2 | 5418554A | 1 | WELD, SAFETY COVER Z3 - BLK |
| 3 | 80003531 | 6 | SCREW, 5/16-18X0.750, GR5, WHIZ-LOCK, ZC |
| 4 | 5107396 | 4 | SPACER, .265 X .50 X .320, CZ |
| 5 | 5106902 | 3 | SPACER, .265 X .50 X .483, CZ |
| 6 | 5107308 | 1 | BOLT, 5/8-18 X 2-1/4 GD8, PHOS -(Torque impeller mounting bolt to 140 ft-lbs (190 Nm)) |
| 7 | 5108105 | 1 | BELLEVILLE WASHERS 1.750 X .656 X .140 |
| 8 | 5107199 | 1 | WASHER, 5/8 X 2" OD |
| 9 | 5106823 | 1 | KEY, 3/8 SQ X 4.00 |
| 10 | 5419590 | 1 | WELD, IMPELLER, 20.30 OD |
| 11 | 5107511 | 1 | PLATE, SPACER, Z3, CZ |
| 12 | 5025390X8 | 4 | BOLT, Flange, 3/8-16 X 1 |
| 13 | 5025095 | 1 | HUT, HEX NYLON LOCK, 1/4x20" |
| 14 | 5106874 | 4 | SCREW, 1/4-20 X 1-1/4, ALLEN, SS |
| 15 | 5107334AA | 1 | PLATE, RACK SPACER - BLK |
| 16 | 5025126 | 15 | NUT, Hex, Serrated Flange, 1/4-20 |
| 17 | 5106951 | 2 | CLIP, SAFETY |
| 18 | 5107335 | 1 | PLATE, DEFLECTOR RACK,CZ |
| 19 | 5106943 | 8 | BUSHING, 1/2 X 3/4 X 1F (0117-081216) |
| 20 | 5025158 | 3 | WASHER, 1/2 SAE |
| 21 | 5107281 | 1 | ROD, DEFLECTOR SUPPORT, Z3 |
| 22 | 5106873 | 1 | BOLT, 1/4-20 X 1-1/2, FLANGE, CZ |
| 23 | 5107483 | 1 | WELD, LEFT POWER DEFLECTOR, Z3, CZ |
| 24 | 5107772 | 1 | WELD, LEFT SLAVE DEFLECTOR, Z3, CZ |
| 25 | 5025169 | 4 | WASHER, 1/4" Lock |
| 26 | 5106903 | 4 | SCREW, 1/4-20 X 1-3/4, ALLEN, SS |
| 27 | 5107339AA | 2 | WELD, UNIVERSAL DEFLECTOR GEAR - BLK |
| 28 | 5107332AA | 2 | PLATE, DEFLECTOR SPACER - BLK |
| 29 | 5107333 | 1 | WELD, RACK KEEPER, CZ |
| 30 | 5106872 | 2 | BOLT, 1/4-20 X 3/4, SER FLG GD5, CZ (15102) |
| 31 | 5107337 | 2 | WELD, FORWARD DEFLECTOR PIN, CZ |
| 32 | 5107496 | 1 | WELD, RIGHT DEFLECTOR, Z3, CZ |
| 33 | 5107329A | 1 | PLATE,FW DEFLECTOR MOTOR MNT - BLK -(Plate only, motor shown for reference only.) |
| 34 | 5107886 | 1 | Z DEFLECTOR PIN RETAINING CABLE (Pin & Lanyard Assembly) |
| 35 | 5107468 | 1 | WELD, FRONT DEFLECTOR, Z3, CZ |
| 36 | 5106919 | 4 | BOLT, 1/4-20 X 1-1/4, FLANGE, CZ |
| 37 | 5025154 | 1 | WASHER, 1/4 SAE |
| 38 | 5025668 | 1 | BOLT, 1/4-20X1-3/4, SER FLG GD5, TFL, CZ |



1 **FERRIS**



4 **FB3000**
HURRICANE



Decal Group - Brand and Model

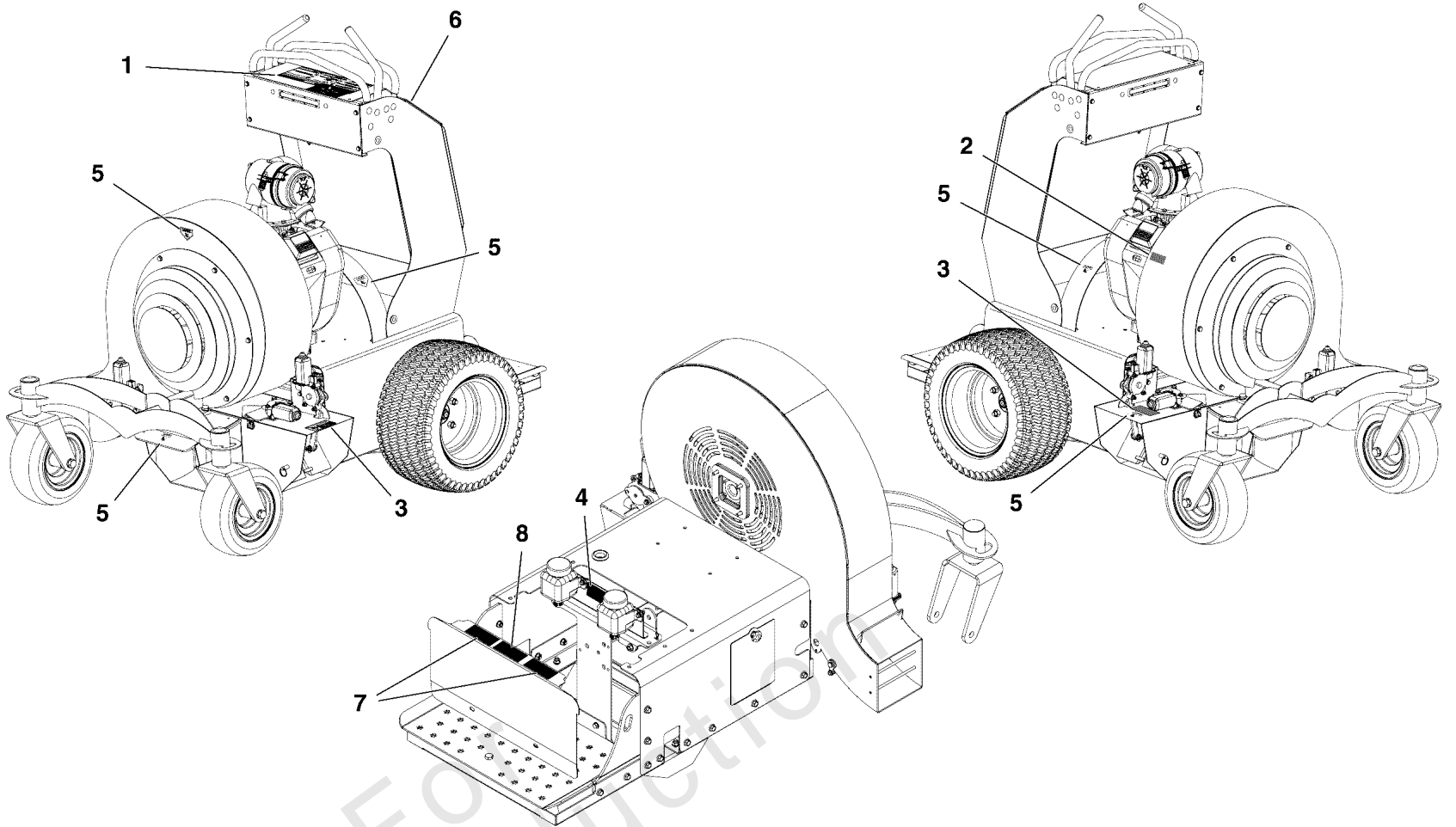
| REF NO | PART NO | QTY | DESCRIPTION |
|--------|----------|-----|-------------------------------------|
| 1 | 5107360 | 1 | DECAL, FERRIS LETTER |
| 2 | 5107361 | 1 | DECAL, BLOWER HOUSING FERRIS SHIELD |
| 3 | 5107357 | 3 | DECAL, FERRIS SHIELD LOGO |
| 4 | 5107584 | 2 | DECAL, FERRIS, FB3000 HURRICANE |
| 5 | 5107362 | 1 | DECAL, CONTROL PANEL FERRIS SHIELD |
| 6 | 5106769 | 1 | DECAL, ASSEMBLED IN THE USA |
| 7 | 80082701 | 2 | DECAL, POWERED BY VANGUARD |

Not For Reproduction

Decal Group - Safety and Operational

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901962



1

OPEN

CLOSE ALL

⚠ DANGER

⚠ WARNING

| | | |
|---|---|---|
| <p>⚠ WARNING: DO NOT SMOKE WHILE REFUELING. DO NOT FILL TANK WHILE ENGINE IS RUNNING OR WHILE ENGINE IS HOT.</p> <p>⚠ DANGER: KEEP SHIELDS AND COVERS IN PLACE WHILE MACHINE IS IN OPERATION. KEEP HANDS AWAY FROM MOVING MACHINERY.</p> <p>⚠ WARNING: IMPROPER USE OR CARE OF THIS BLOWER OR FAILURE TO WEAR PROPER PROTECTION CAN RESULT IN SERIOUS INJURY.</p> <p>⚠ WARNING: TO PREVENT FIRE, KEEP ENGINE AND PUMP COMPARTMENTS CLEAN, ESPECIALLY IN EXHAUST AREA.</p> | <p>⚠ WARNING: THROWN OBJECTS CAN CAUSE SERIOUS INJURY.</p> <p>KEEP BYSTANDERS AWAY.</p> <p>⚠ DANGER: KEEP HANDS AND FEET AWAY FROM INTAKE AND DISCHARGE AREA. ROTATING FAN WILL CAUSE SERIOUS INJURY.</p> <p>READ AND UNDERSTAND THE OWNER'S MANUAL. PAY PARTICULAR ATTENTION TO ALL SECTIONS REGARDING SAFETY.</p> | <p>ALWAYS WEAR HEARING AND EYE PROTECTION.</p> <p>BEFORE PERFORMING ANY SERVICE OR MAINTENANCE, DISCONNECT SPARK PLUG WIRE. MAKE SURE THROTTLE IS IN STOP POSITION.</p> <p>USE EXTREME CAUTION OPERATING ON SLOPES. MOVE SLOWLY AND AVOID SUDDEN OR JERKY MOVEMENTS.</p> |
|---|---|---|

3

⚠ CAUTION

PINCH POINT

7

TRANSAXLE BYPASS VALVE

PULL CABLE UP AND SIDWAYS TO ENGAGE BYPASS

⚠ DO NOT PUSH OR TOW MACHINE WITHOUT FIRST ENGAGING THE TRANSAXLE BYPASS. TRANSAXLE DAMAGE MAY OCCUR.

2

⚠ DANGER

KEEP HANDS AWAY FROM MOVING PARTS

8

EMERGENCY BRAKE RELEASE

LIFT LEVER

73-4211

5

⚠ DANGER

KEEP HANDS AND FEET AWAY

4

HYDROSTATIC OIL FILL

USE ONLY MOBIL 1 15W-50 SYNTHETIC

DO NOT OVERFILL

6

FORWARD

REVERSE

FUEL FILL (GASOLINE ONLY)

OIL ALERT

PARKING BRAKE

RED DOTTED LINE = BRAKE AUTOMATICALLY ENGAGED
GRAY FILL = BRAKE AUTOMATICALLY DISENGAGED

⚠ WARNING

Decal Group - Safety and Operational

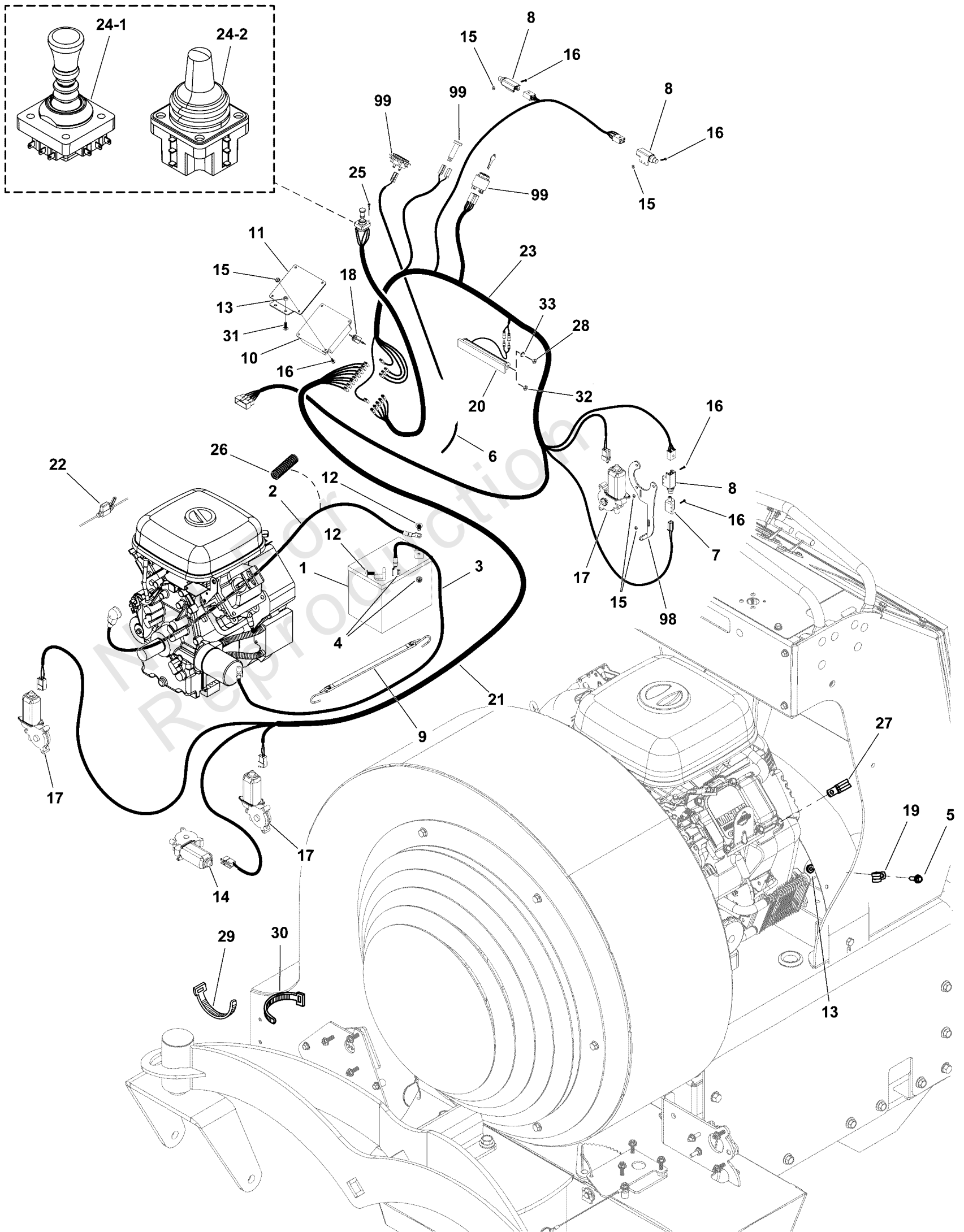
| REF NO | PART NO | QTY | DESCRIPTION |
|---------------|----------------|------------|------------------------|
| 1 | 5107509 | 1 | DECAL, DASH, JOYSTICK |
| 2 | 5106771 | 1 | DECAL, HOT |
| 3 | 5106773 | 2 | DECAL, PINCH |
| 4 | 5106774 | 1 | DECAL, HYDRO |
| 5 | 5106775 | 5 | DECAL, DANGER |
| 6 | 5106776 | 1 | DECAL, DASH CONTROLS |
| 7 | 5106777 | 2 | DECAL, TRANS BYPASS |
| 8 | 5106778 | 1 | DECAL, EMERGENCY BRAKE |

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Electrical Group

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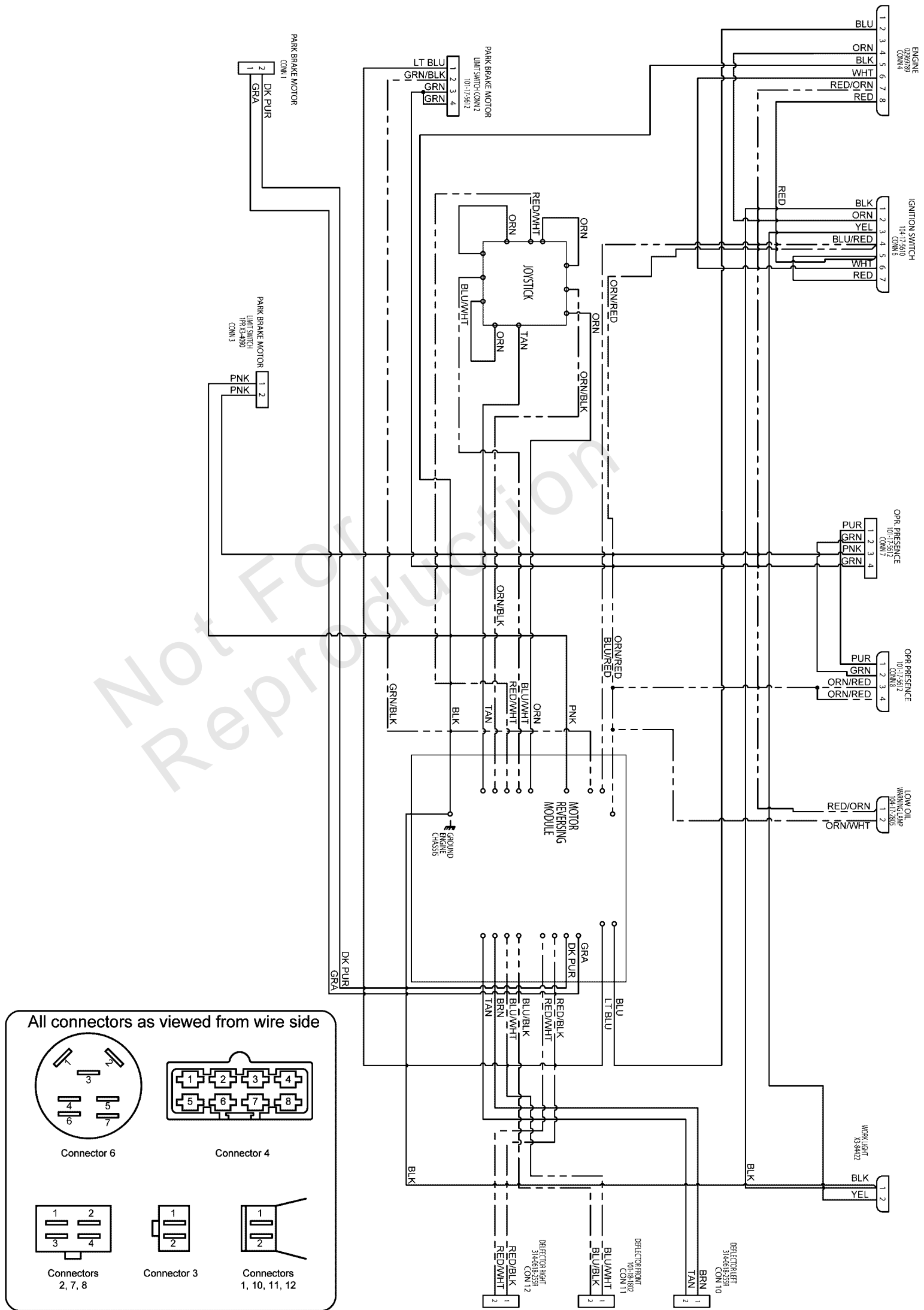
Electrical Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|--------------|-----|---|
| 1 | ----- | 1 | BATTERY -(12 volt, 230 cca) |
| 2 | 5107244 | 1 | BATTERY CABLE, POS, 24.69, 5/16-5/16 |
| 3 | 5107245 | 1 | BATTERY CABLE, NEG, 13.50, 5/16-3/8 |
| 4 | 5025127 | 2 | NUT, 5/16-18 HEX SERRATED FLANGE (SMALL) |
| 5 | 5106872 | 2 | BOLT, 1/4-20 X 3/4, SER FLG GD5, CZ (15102) |
| 6 | 5107043 | 1 | WIRE HARNESS, TACH X3,Z3 -(End without terminal is wrapped around spark plug wire and secure with wire tie.) |
| 7 | 5021769 | 1 | SWITCH, PLUNGER, N.C. |
| 8 | 5106950 | 3 | SWITCH, SAFETY(2P) |
| 9 | 5106918 | 1 | STRAP, BATTERY |
| 10 | 5601264 | 1 | KIT, RELAY, CONTROL MODULE -(Includes reference number #18). |
| 11 | 5107407AA | 1 | BRACKET, RELAY MOUNT - BLK |
| 12 | 5025145X6 | 2 | BOLT, 5/16-18 X 3/4, CARRIAGE, GD5, CZ |
| 13 | 5025126 | 4 | NUT, Hex, Serrated Flange, 1/4-20 |
| 14 | 5106953 | 1 | MOTOR, DEFLECTOR, CENTER |
| 15 | 80013127 | 12 | NUT, #10-32, HEX, KEPS, ZC/CL |
| 16 | 5106875 | 12 | SCREW, #10-32 X 3/4, ALLEN, SS |
| 17 | 5106952 | 3 | MOTOR, DEFLECTOR, RIGHT, LEFT, BRAKE |
| 18 | 5107310 | 1 | CIRCUIT BREAKER, 15A A-RESET |
| 19 | 5107053 | 2 | CLAMP, VINYL INSULATED, .50 |
| 20 | 5420644 | 1 | HEADLIGHT, DEBRIS BLOWER |
| 21 | 5107313 | 1 | WIRE HARNESS, DEFLECTOR, Z3 (ZP17884-1) |
| 22 | 5107311 | 1 | FUSE HOLDER, Z3 (ZP17880) |
| 23 | 5107312 | 1 | WIRE HARNESS, MAIN, Z3 (ZP17884) |
| 24-1 | 5601265 | 1 | KIT, JOYSTICK UPDATE -(S/N: 4001275566 and below) |
| 24-2 | 5108766 | 1 | JOYSTICK ASSEMBLY, DEBRIS BLOWER -(S/N: 4001275567 and above) |
| 25 | 5106917 | 4 | SCREW, #8-32 X 3/8, ALLEN, SS |
| 26 | 5050927X17P5 | 1 | WIRE LOOM, 3/8 ID X 17.5 IN |
| 27 | 5107987 | 2 | CLAMP, VINYL INSULATED, .75 |
| 28 | 5025672 | 2 | NUT, HEX, M5X.8MM, NYLON INSERT -(For headlights with 5MM studs) |
| 29 | 5021029 | 2 | TIE, SELF-LOCKING, 12" |
| 30 | 5021030 | 8 | TIE, SELF-LOCKING, 6" |
| 31 | 80003518 | 2 | BOLT,1/4-20X0.750,GR5,STD NECK,SQ,ZC/CL |
| 32 | 5025669 | 2 | NUT, HEX, M6-1, NYLON INSERT -(For headlights with 6MM studs) |
| 33 | 5025673 | | WASHER, 5MM, STAR, CZ -(For headlights with 5MM studs) |
| 98 | ----- | 0 | Refer to: Parking Brake Group |
| 99 | ----- | 0 | Refer to: Instrument Control Panel Group |

Electrical Schematic

Note: Unless noted otherwise, use the standard torque specifications

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Electrical Schematic

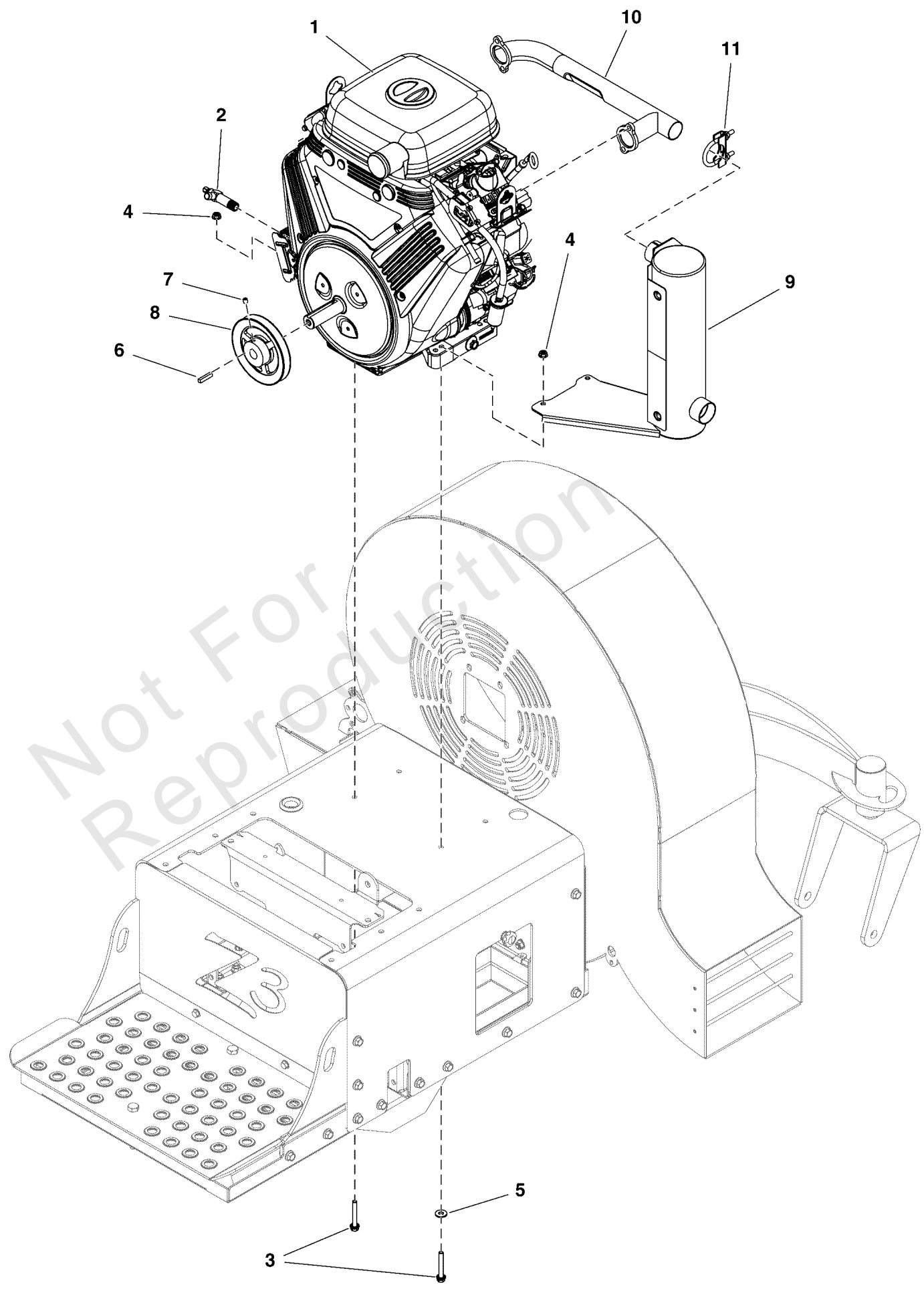
| REF NO | PART NO | QTY | DESCRIPTION |
|--------|---------|-----|---|
| 1 | 5107043 | 1 | WIRE HARNESS, TACH X3,Z3 |
| 2 | 5107313 | 1 | WIRE HARNESS, DEFLECTOR, Z3 (ZP17884-1) |
| 3 | 5107312 | 1 | WIRE HARNESS, MAIN, Z3 (ZP17884) |

Not For Reproduction

Engine Group

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Engine Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|------------|-----|--|
| 1 | ----- | 1 | ENGINE, VANGUARD, 993cc |
| 2 | 5107284 | 1 | VALVE, OIL DRAIN |
| 3 | 5107304 | 4 | BOLT, 5/16-18 X 2-1/4, SER FLNG GD5, CZ |
| 4 | 5025127 | 4 | NUT, 5/16-18 HEX SERRATED FLANGE (SMALL) |
| 5 | 5107147 | 1 | WASHER, 5/16 FLAT, CZ |
| 6 | 5050407X10 | 1 | KEY, 1/4" SQ. X 1-1/4 |
| 7 | 5107062 | 2 | SET SCREW, 5/16-18 (107-17-3213) |
| 8 | 5107285 | 1 | PULLEY, DRIVE (ZP15019) |
| 9 | 5109327 | 1 | MUFFLER, 35HP BRIGGS, BLWR |
| 10 | 5109328 | 1 | MANIFOLD 35HP BRIGGS, BLWR |
| 11 | 5107305 | 1 | CLAMP, MUFFLER, Z3 (ZP17012) |

Not For Reproduction

Fuel Tank and Hose Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|-------------|-----|---|
| 1 | 5107316 | 1 | FUEL CAP, 2.0, NON VENTED |
| 2 | 5418869 | 1 | WELD, FUEL TANK, BLOWER -(S/N: 4001291676 and below) |
| 2 | 5420219 | 1 | ASSM, FUEL TANK, BLOWER -(S/N: 4001291677 and above)(Refer to Note: *) |
| 3 | 5106863 | 4 | SCREW, 1/4-20 X 3/4, FPHMS, SS |
| 4 | 5025126 | 4 | NUT, Hex, Serrated Flange, 1/4-20 |
| 5 | 5050831X6 | 1 | HOSE, 1/4" FUEL, 6" LONG |
| 6 | 5107072 | 1 | VALVE, FUEL SHUT OFF |
| 7 | 5107073 | 1 | PICKUP TUBE ASM,FUEL 16.75 |
| 8 | 5106957 | 1 | FITTING, 1/4X3/16 REDUCER -(For units with 1/4" hose.) |
| 9 | 5106956 | 1 | FITTING, 1/4 TEE,BARB TYPE |
| 10 | 5106954 | 1 | FITTING, 90, 1/4-18 NPT NYLON |
| 11 | 7700552X2P5 | 3 | HOSE, VAPOR, 5MM ID, 2.50 LG |
| 12 | 80025019 | 1 | FILTER, FUEL |
| 13 | 5106955 | 1 | CHECK VALVE ASMY |
| 14 | 93807 | 4 | CLAMP, Hose |
| 15 | 7700552X4 | 1 | HOSE, VAPOR, 5MM ID, 4.00 LG |
| 16 | 5021030 | 1 | TIE, SELF-LOCKING, 6" |
| 17 | 5050831X4 | 1 | 1/4" Fuel Line, 4" Long |

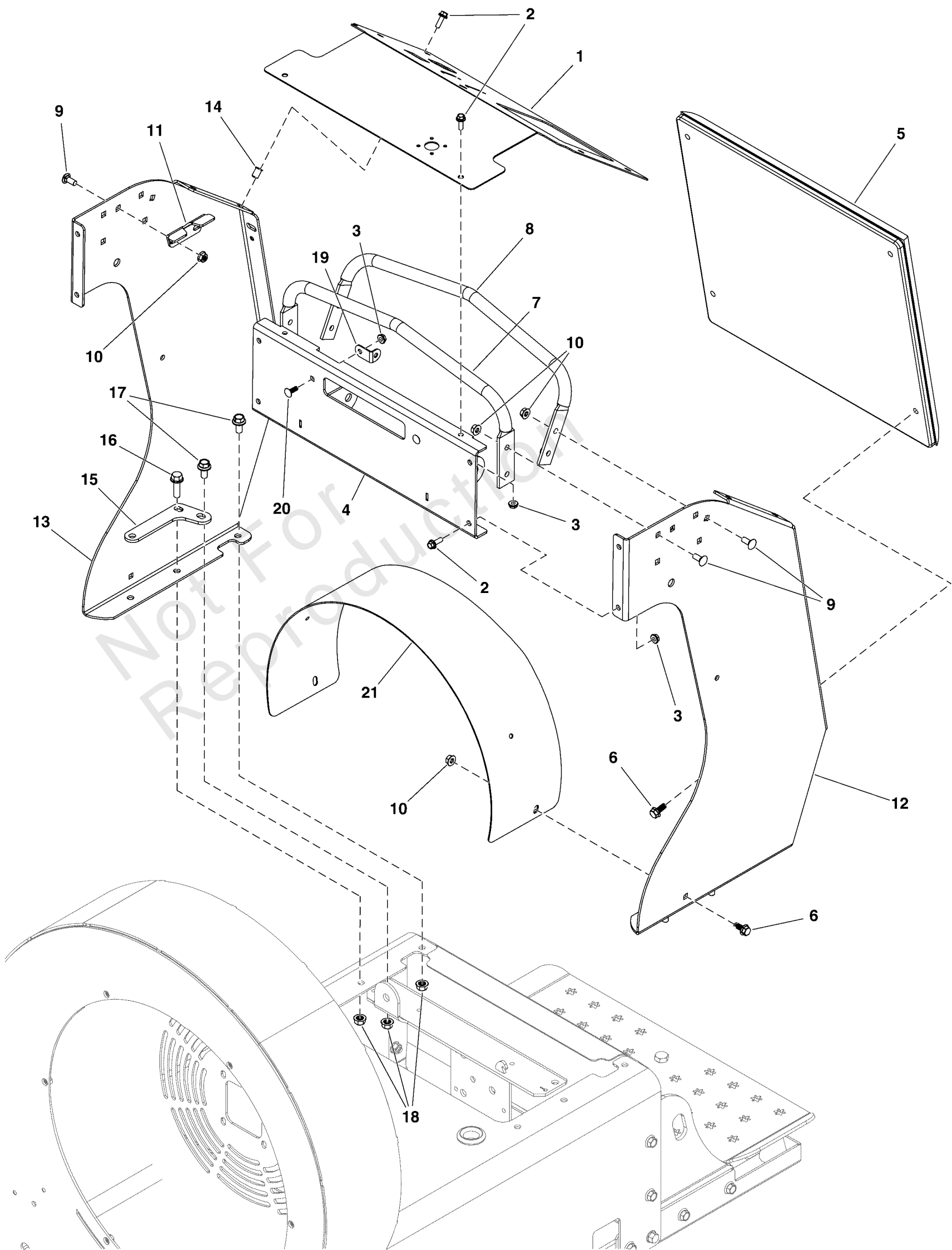
Footnotes:

Note: *Includes reference items #1, #7, and #10.

Handle Bar Group

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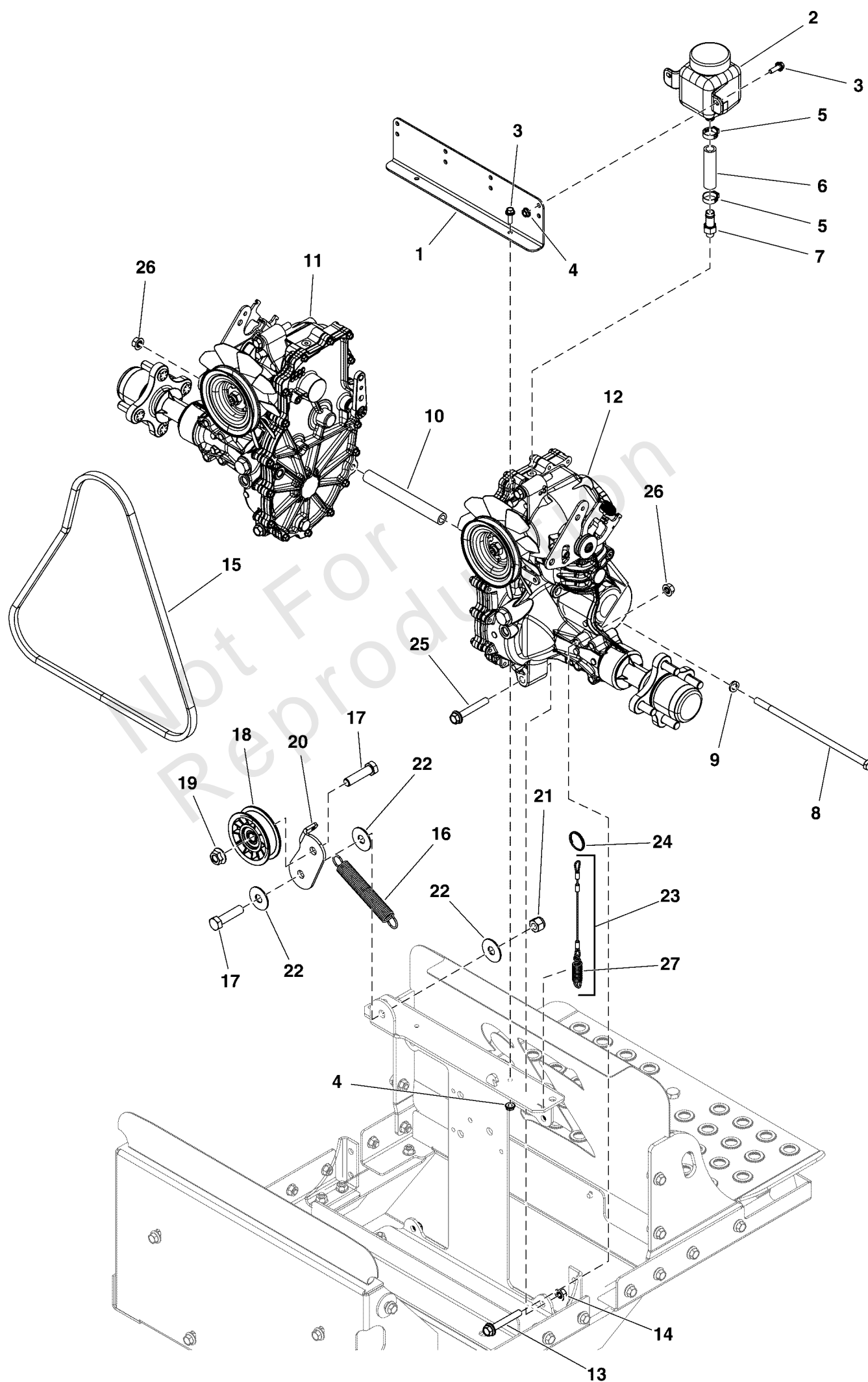
Handle Bar Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|-----------|-----|--|
| 1 | 5601267 | 1 | PLATE, DASH PANEL, NEW WITH DECALS |
| 2 | 5106872 | 10 | BOLT, 1/4-20 X 3/4, SER FLG GD5, CZ (15102) |
| 3 | 5025126 | 10 | NUT, Hex, Serrated Flange, 1/4-20 |
| 4 | 5418513AI | 1 | WELD, DASH FRONT PANEL - RED |
| 5 | 5107538 | 1 | KNEE PAD, BLWR |
| 6 | 80003531 | 6 | SCREW, 5/16-18X0.750, GR5, WHIZ-LOCK, ZC |
| 7 | 5107044A | 1 | FRONT HANDLE, BLWR - BLK |
| 8 | 5107045A | 1 | REAR HANDLE, BLWR - BLK |
| 9 | 5025145X6 | 12 | BOLT, 5/16-18 X 3/4, CARRIAGE, GD5, CZ |
| 10 | 5025127 | 14 | NUT, 5/16-18 HEX SERRATED FLANGE (SMALL) |
| 11 | 5107391 | 2 | BRACKET, NEUTRAL CENTERING, CZ |
| 12 | 5418579AI | 1 | CONTROL TOWER Z3, LH - RED |
| 13 | 5418578AI | 1 | CONTROL TOWER Z3, RH - RED |
| 14 | 5106833 | 4 | NUT, 1/4-20, RIV, CZ |
| 15 | 5107544A | 2 | PLATE, UPPER BEAM MOUNT, Z3 - BLK |
| 16 | 5025390X8 | 4 | BOLT, Flange, 3/8-16 X 1 |
| 17 | 5025390X8 | 4 | BOLT, Flange, 3/8-16 X 1 |
| 18 | 5025666 | 8 | NUT, 3/8-16, FLANGE, SERRATED UNDER HEAD |
| 19 | 5107389AA | 2 | BRACKET, L HEADLIGHT MOUNT - BLK |
| 20 | 80003518 | 2 | BOLT, 1/4-20X0.750, GR5, STD NECK, SQ, ZC/CL |
| 21 | 5418616AI | 1 | PLATE, BELT GUARD COVER, Z3 - RED |

Hydraulic Group

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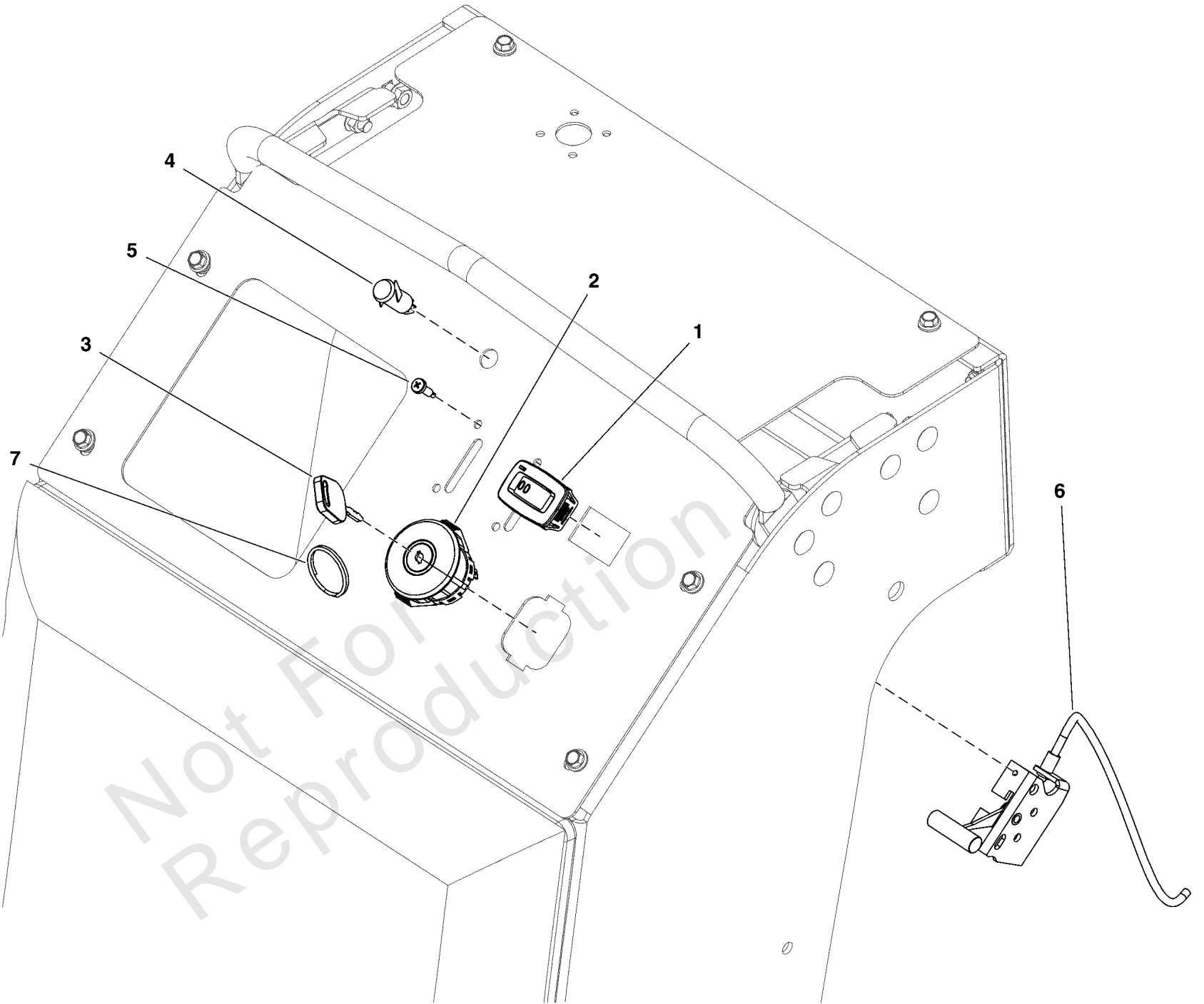
Hydraulic Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|--------------|-----|---|
| 1 | 5107366AA | 1 | MOUNT, OIL RESERVOIR - BLK |
| 2 | 5100473 | 2 | RESERVOIR, HYDRO OIL, 350 ML |
| 3 | 5106872 | 6 | BOLT, 1/4-20 X 3/4, SER FLG GD5, CZ (15102) |
| 4 | 5025126 | 6 | NUT, Hex, Serrated Flange, 1/4-20 |
| 5 | 5025474 | 4 | CLAMP, HOSE, .75 FREE DIA. |
| 6 | 5050857X2P75 | 2 | HOSE, 1/2" PUSH-ON, 2.75" |
| 7 | 5107224 | 2 | FITTING, STRAIGHT 7/16-20 UNF (HU002) |
| 8 | 5025667 | 1 | BOLT, HEX, 3/8-16 X 10" GD 5, CZ |
| 9 | 5025156 | 1 | WASHER, 3/8 SAE |
| 10 | 5107370 | 1 | SPACER, .75 OD X 6.40 LONG, 10GA (X3-1436) |
| 11 | 5107227 | 1 | TRANSAXLE, ZT3100, RH, ZJ-LPRP-3A7C-19XX -(S/N: 40015467047 and below) |
| 11 | 5109238 | 1 | TRANSAXLE, ZT-3100, RH,ZJ-LPRP-SA7C-19XX -(S/N: 40015467048 and above) |
| 12 | 5107222 | 1 | TRANSAXLE, ZT3100, LH, ZJ-HPRP-3A7B-19XX -(S/N: 40015467047 and below) |
| 12 | 5109239 | 1 | TRANSAXLE, ZT-3100, LH,ZJ-HPRP-SA7B-19XX -(S/N: 40015467048 and above) |
| 13 | 5025670 | 4 | BOLT, HEX, 3/8-16 X 3", SER FLG GRD5, CZ |
| 14 | 5025666 | 4 | NUT, 3/8-16, FLANGE, SERRATED UNDER HEAD |
| 15 | 5106821 | 1 | BELT, DRIVE, Z3 (ZP15017) |
| 16 | 5106923 | 1 | SPRING, IDLER, #98 (16127) |
| 17 | 5025017X16 | 2 | BOLT, 1/2-13 X 2" GD5 CZ |
| 18 | 5107103 | 1 | PULLEY IDLER 3.0 OD .506ID .75 (17-4101) |
| 19 | 5025396 | 1 | NUT, Hex Flange, Nylock, 1/2-13 |
| 20 | 5107365AA | 1 | IDLER ARM - BLK |
| 21 | 5025056 | 1 | NUT, Hex, Nylon Lock, 1/2-13 |
| 22 | 5107348 | 3 | WASHER, 0.54 X 1.50 X 0.060, CZ |
| 23 | 5107300 | 2 | CABLE, HYDRO NEUTRAL RLS (ZP15049) -(Includes item # 28.) |
| 24 | 5108012 | 2 | KEY RING, SPLIT 1" |
| 25 | 5106859 | 4 | BOLT, 3/8-16 X 2-1/2, SER FLG GD5, CZ (15087) |
| 26 | 5025394 | 5 | NUT, 3/8 - 16 HEX NYLOCK FLANGE |
| 27 | 5106888 | 2 | SPRING, EXTENSION, #29 |

Instrument Control Panel Group

Note: Unless noted otherwise, use the standard torque specifications

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Instrument Control Panel Group

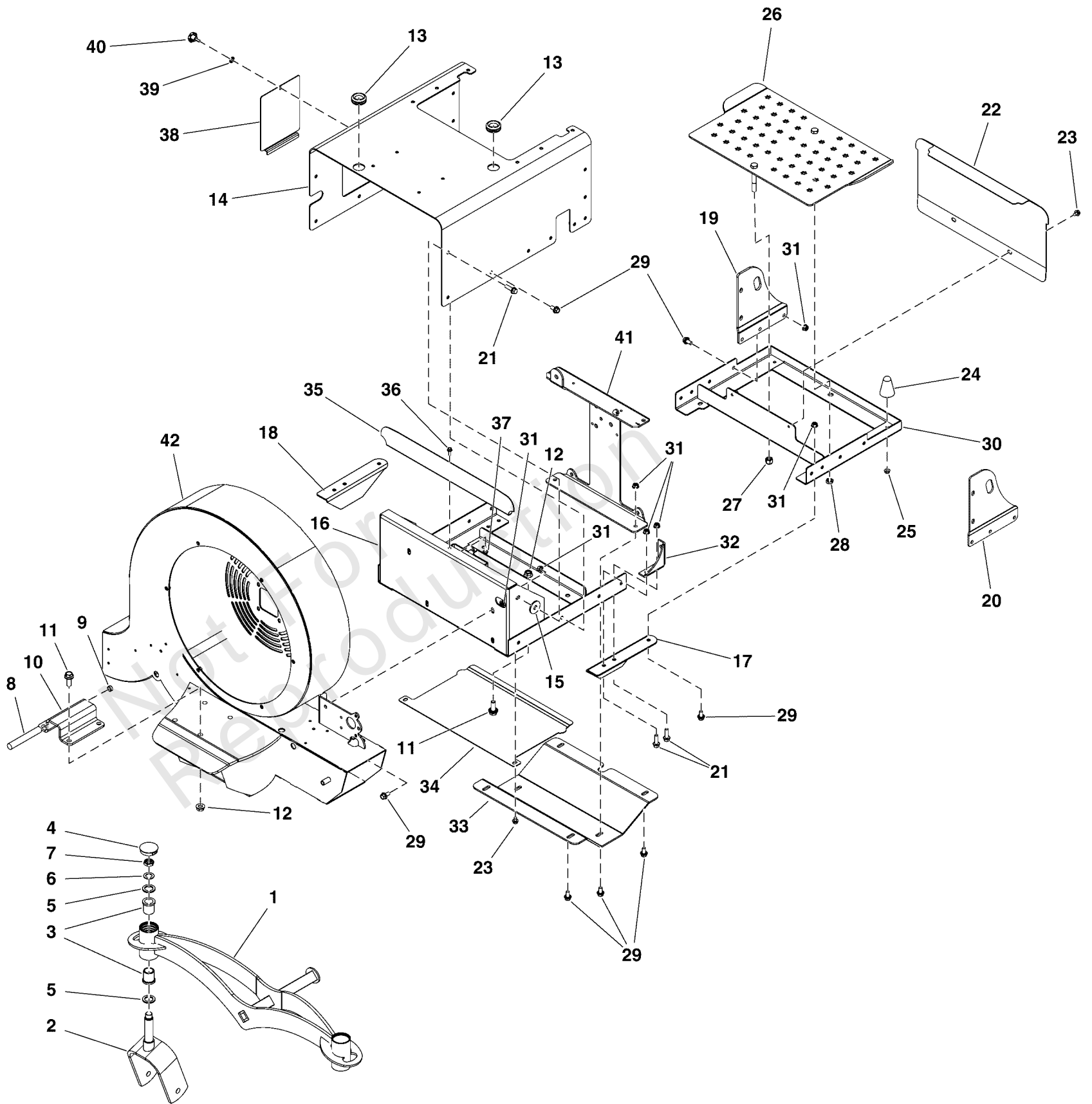
| REF NO | PART NO | QTY | DESCRIPTION |
|--------|---------|-----|---|
| 1 | 5106789 | 1 | HOUR, METER & TECH |
| 2 | 5107021 | 1 | SWITCH, IGNITION, SNAP-IN |
| 3 | 1714054 | 2 | KEY, Ignition |
| 4 | 5106974 | 1 | LIGHT, WARNING |
| 5 | 5106862 | 4 | SCREW, #10-16 X 1/2, SLF DRLNG, CZ |
| 6 | 5107194 | 2 | CABLE, THROTTLE/CHOKE |
| 7 | 5108012 | 1 | KEY RING, SPLIT 1" -(Key Ring for ignition keys) |

Not For Reproduction

Main Frame Group

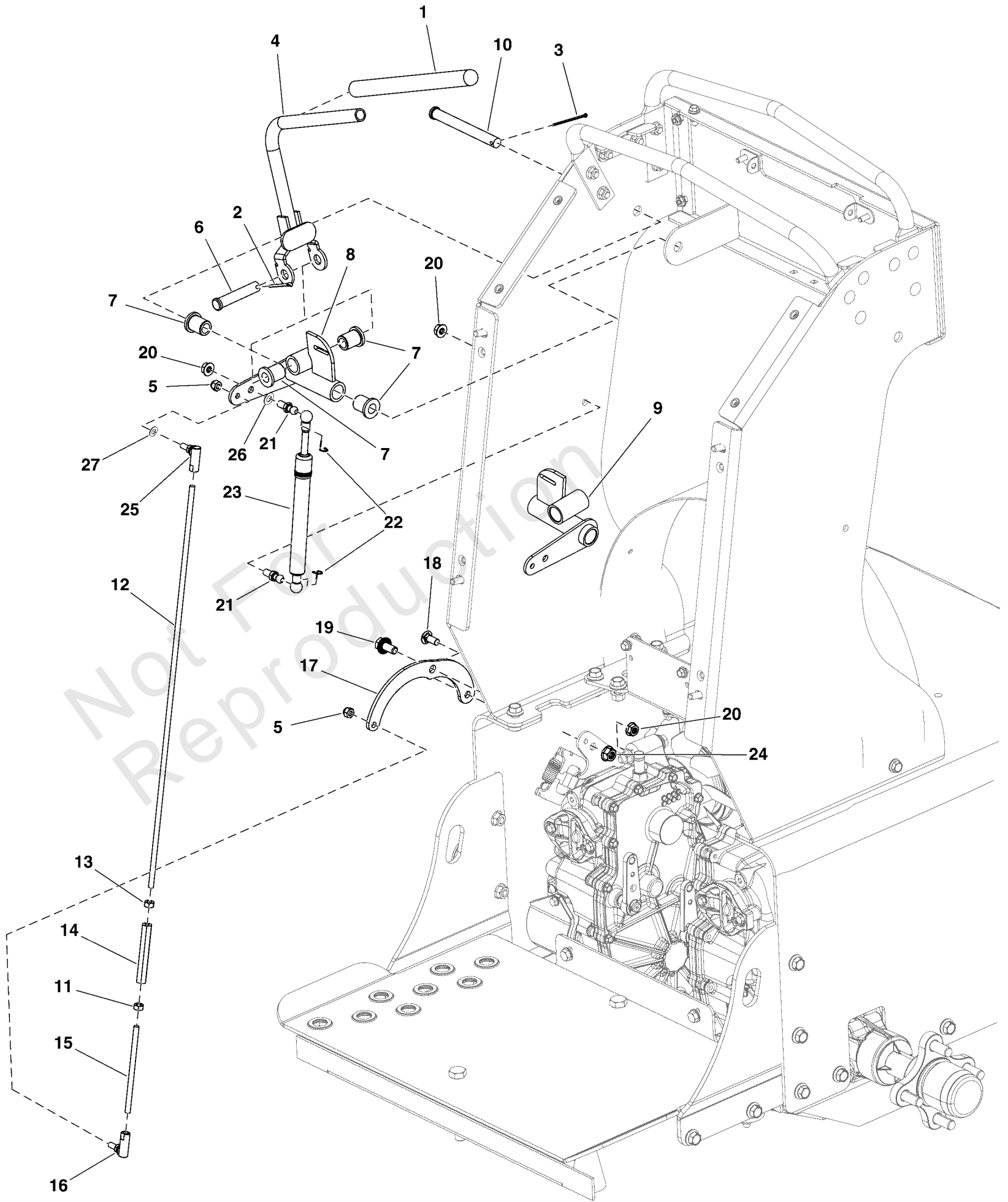
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Main Frame Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|------------|-----|--|
| 1 | 5418613AI | 1 | WELD, FRONT END FRAME, Z3 - RED |
| 2 | 5418606AI | 2 | WELD, CASTER FORK, Z3 - RED |
| 3 | 5021541 | 4 | BUSHING, FLANGE |
| 4 | 5107567 | 2 | CAP, GREASE, PLASTIC |
| 5 | 5107778 | 4 | WASHER, 1 X 10GA, MACH, CZ |
| 6 | 5106783 | 2 | NUT, 3/4-10, NYLOCK JAM, CZ |
| 7 | 5107779 | 2 | WASHER, 3/4 X 14GA, MACH, CZ |
| 8 | 5107356 | 4 | CORD, RUBBER |
| 9 | ----- | 2 | RUBBER BAND -(Rubber Brand is used to hold the four pieces of #8 together.) |
| 10 | 5419091AI | 1 | PLATE, FRONT END TORSION C - RED |
| 11 | 5106786 | 6 | BOLT, 1/2-13 X 1-1/4, FLANGE, CZ |
| 12 | 5106787 | 6 | NUT, 1/2-13, SER FLG, CZ (15046) |
| 13 | 5106788 | 2 | GROMMET, RUBBER |
| 14 | 5418580AI | 1 | WELD, MOTOR BOX, Z3 - RED |
| 15 | 5107390 | 2 | SPACER, MOTOR BOX 10GA |
| 16 | 5107547A | 1 | WELD, Z3 FRONT CHASSIS - BLK |
| 17 | 5107383A | 1 | BRACKET, BOTTOM CHASSIS LEFT - BLK |
| 18 | 5107382A | 1 | BRACKET, BOTTOM CHASSIS RIGHT - BLK |
| 19 | 5418520AI | 1 | PLATE, TIE DOWN RH - RED |
| 20 | 5418521AI | 1 | PLATE TIE DOWN LH - RED |
| 21 | 5025390X10 | 10 | BOLT, 3/8-16 X 1-1/4, FLANGE, GD 5, CZ |
| 22 | 5419301AI | 1 | PLATE, TOE KICK, FB3000 - RED |
| 23 | 5106898 | 4 | SCREW, 5/16-18 X 1/2, SLF TPNG, CZ |
| 24 | 5107206 | 4 | BUMPER, RUBBER, 5/16-18 |
| 25 | 5025127 | 4 | NUT, 5/16-18 HEX SERRATED FLANGE (SMALL) |
| 26 | 5418525A | 1 | WELD, PLATFORM, BLWR - BLK |
| 27 | 5025056 | 1 | NUT, Hex, Nylon Lock, 1/2-13 |
| 28 | 5025646 | 1 | NUT, NTE, 1/2-13, CZ |
| 29 | 5106881 | 28 | BOLT, 3/8-16 X 3/4, SER FLG GD5, CZ (15112) |
| 30 | 5107561A | 1 | WELD, Z3 REAR CHASSIS - BLK |
| 31 | 5025666 | 38 | NUT, 3/8-16, FLANGE, SERRATED UNDER HEAD |
| 32 | 5107387A | 2 | WELD, TRANS 90 DEG MOUNT BRACKET - BLK |
| 33 | 5107384A | 1 | PLATE, SKID - BLK |
| 34 | 5107385A | 1 | GUARD, LOWER DEBRIS - BLK |
| 35 | 5107386A | 1 | GUARD, FORWARD DEBRIS - BLK |
| 36 | 5106872 | 2 | BOLT, 1/4-20 X 3/4, SER FLG GD5, CZ (15102) |
| 37 | 5025126 | 2 | NUT, Hex, Serrated Flange, 1/4-20 |
| 38 | 5419192AI | 1 | PLATE, BATTERY DOOR - RED |
| 39 | 5107350 | 1 | WASHER, INT / EXT TOOTH, CZ |
| 40 | 5106913 | 1 | KNOB, 1/4-20 X 1/2 CAP SCREW |
| 41 | 5418591A | 1 | WELD TRANS I-BEAM, Z3 - BLK |
| 42 | 5418642AI | 1 | WELD, BLOWER HOUSING , Z3 - RED |



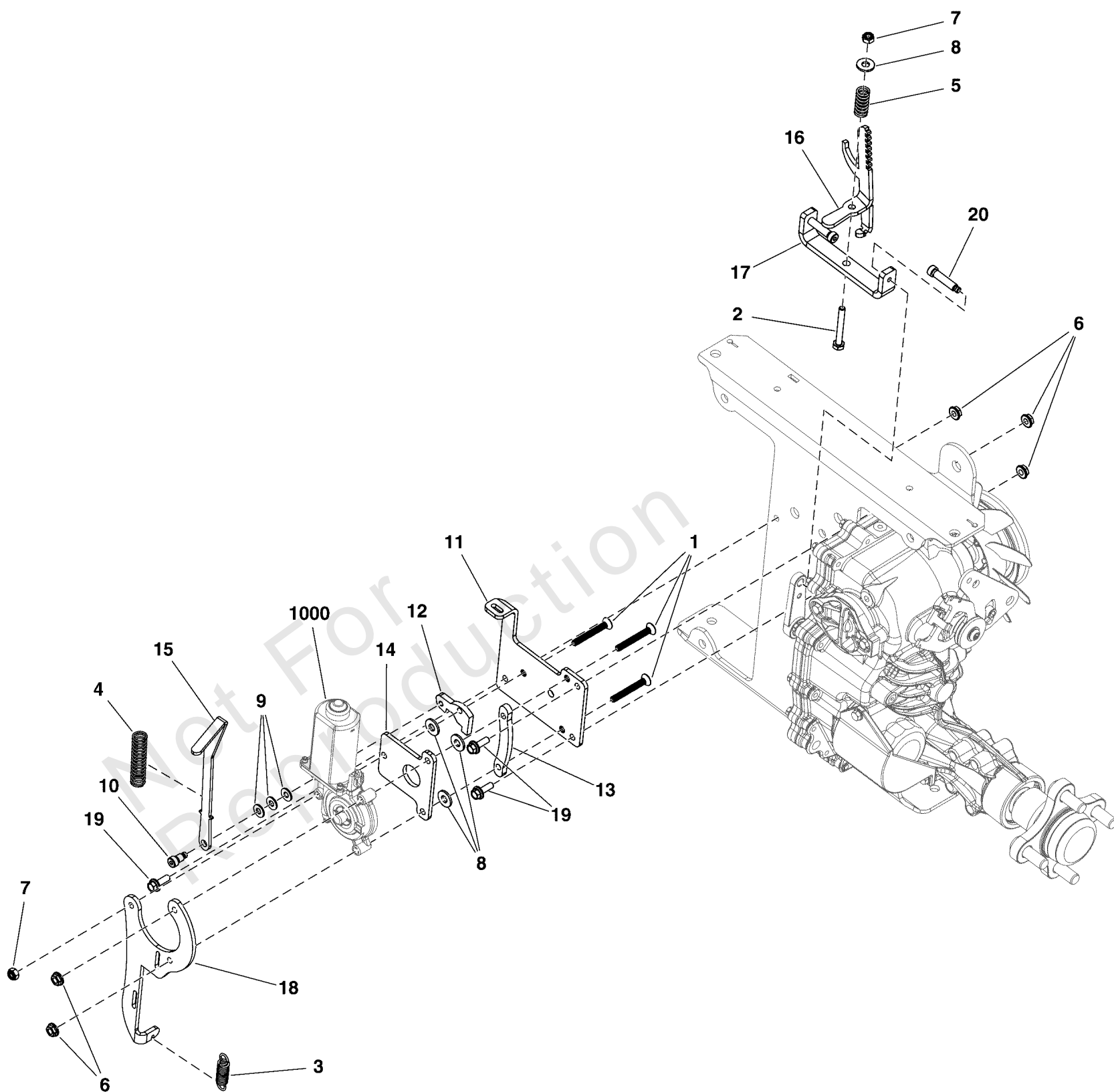
Motion Control Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|------------|-----|---|
| 1 | 5106940 | 2 | GRIP CONTROL 9-1/2 (139530) |
| 2 | 5025203X12 | 2 | PIN, COTTER, 1/8 X 1 1/2, CZ |
| 3 | 5107351 | 2 | PIN, COTTER, 3/32 X 2.00, CZ |
| 4 | 5107368 | 2 | WELD, CONTROL HANDLE (14-40-2011) |
| 5 | 5106892 | 4 | NUT, 1/4-28, NYLOCK, GD2 CZ (15140) |
| 6 | 5022044 | 2 | PIN-CLEVIS, 1/2 X 2-1/2 YZP |
| 7 | 5106943 | 8 | BUSHING, 1/2 X 3/4 X 1F (0117-081216) |
| 8 | 5107369 | 1 | WELD, CONTROL SWITCH BRACKET LH (X3-1438) |
| 9 | 5107367 | 1 | WELD, CONTROL SWITCH BRACKET RH (X3-1437) |
| 10 | 5025456 | 2 | PIN CLEVIS 1/2" X 4-1/2" PLT |
| 11 | 5106853 | 2 | NUT, 1/4-28, RH, GD5 CZ (15081) |
| 12 | 5107108 | 2 | ROD, 1/4-28 x 21" YZ (2500-2100) |
| 13 | 5106858 | 2 | NUT, 1/4-28, LH, YZ (15086) |
| 14 | 5106971 | 2 | TURNBUCKLE, 1/4-28 X 3 (103-17-4635) |
| 15 | 5107303 | 2 | ROD 1/4-28 X 4-1/2" YZ (ZP16054) |
| 16 | 5106802 | 2 | BALL JOINT, 1/4"-28 THREAD LH |
| 17 | 5107241 | 2 | ARM, TRANSMISSION CONTROL (X3-1520) |
| 18 | 5025145X6 | 2 | BOLT, 5/16-18 X 3/4, CARRIAGE, GD5, CZ |
| 19 | 5106881 | 2 | BOLT, 3/8-16 X 3/4, SER FLG GD5, CZ (15112) |
| 20 | 5025127 | 6 | NUT, 5/16-18 HEX SERRATED FLANGE (SMALL) |
| 21 | 5100941 | 4 | BALL STUD, 5/16 X .50,# PC-477-2) |
| 22 | 5106969 | 4 | CLIP, DAMPER BALL STUD (103-17-4431) |
| 23 | 5107193 | 2 | DAMPER (425-103-174430) |
| 24 | 5025666 | 2 | NUT, 3/8-16, FLANGE, SERRATED UNDER HEAD |
| 25 | 5106803 | 2 | BALL JOINT, 1/4-28 RH STUD |
| 26 | 5025155 | 2 | WASHER, 5/16" SAE |
| 27 | 5025154 | 2 | WASHER, 1/4 SAE |

Parking Brake Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901962



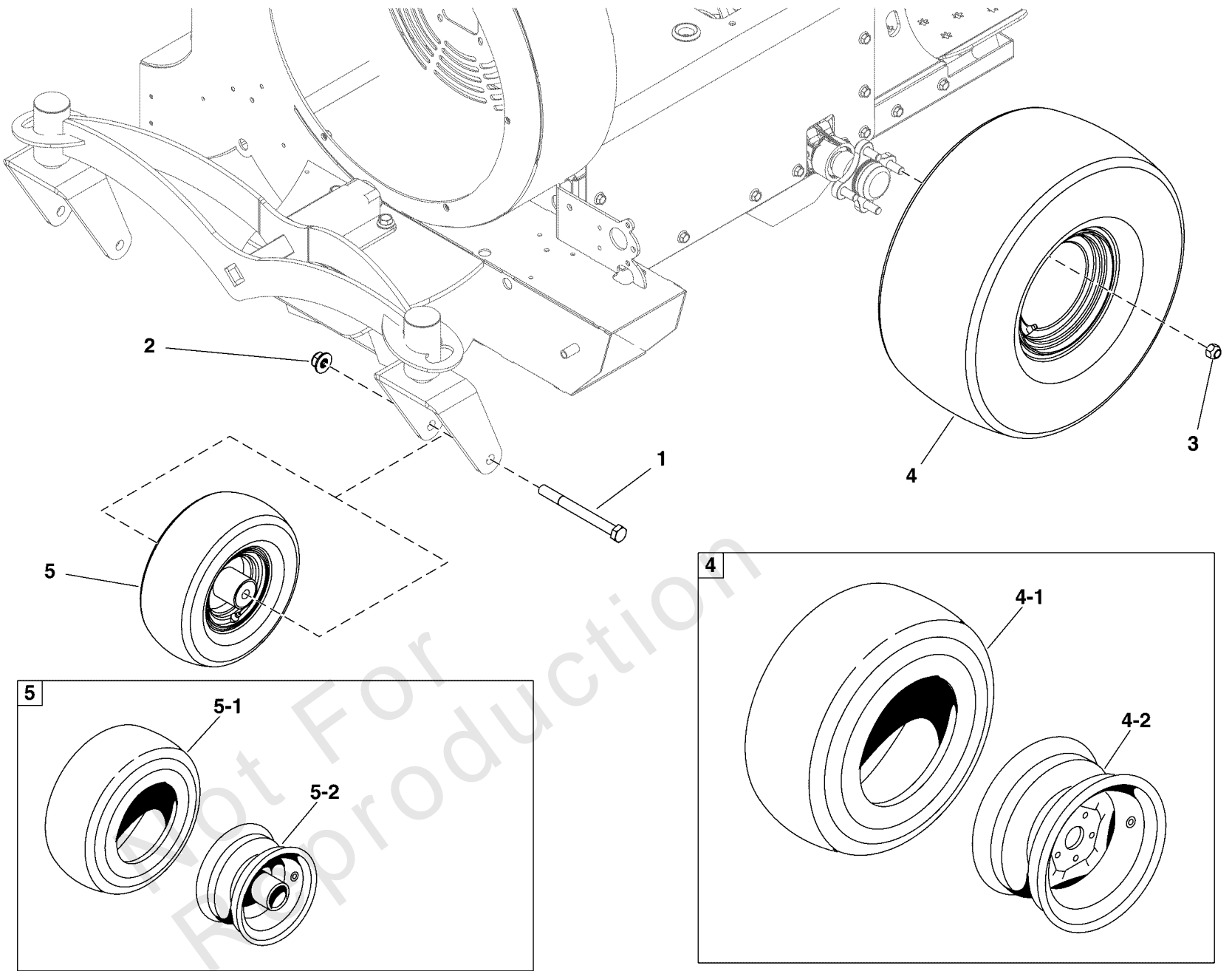
Parking Brake Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|------------|-----|---|
| 1 | 5106908 | 3 | SCREW, 1/4-20 X 2, PHLPS, SS |
| 2 | 5025010X16 | 1 | BOLT, 1/4-20 X 2", GD5 |
| 3 | 5106888 | 1 | SPRING, EXTENSION, #29 |
| 4 | 5106910 | 1 | SPRING, COMPRESSION, #29 |
| 5 | 5106911 | 1 | SPRING, COMPRESSION, #21 |
| 6 | 5025126 | 5 | NUT, Hex, Serrated Flange, 1/4-20 |
| 7 | 5025095 | 2 | HUT, HEX NYLON LOCK, 1/4x20" |
| 8 | 5106815 | 4 | WASHER, 1/4 SAE, CZ |
| 9 | 5025154 | 3 | WASHER, 1/4 SAE |
| 10 | 5106912 | 1 | BOLT, 5/16 X 1/2, SHLDR, SS |
| 11 | 5107321 | 1 | PLATE, BRAKE BACKING |
| 12 | 5107322 | 1 | PLATE, BRAKE CAM, CZ |
| 13 | 5107323AA | 1 | PLATE, BRAKE SPACER - BLK |
| 14 | 5107324 | 1 | PLATE, CAM COVER, CZ |
| 15 | 5107328 | 1 | PLATE, BRAKE RELEASE LEVER,CZ |
| 16 | 5107325 | 1 | WELD, BRAKE GEAR RACK,CZ |
| 17 | 5107326 | 1 | PLATE, BRAKE LEVER ARM |
| 18 | 5107327 | 1 | PLATE, SWITCH MOUNT, CZ |
| 19 | 5106872 | 3 | BOLT, 1/4-20 X 3/4, SER FLG GD5, CZ (15102) |
| 20 | 5106941 | 2 | BOLT, 5/16 X 1-1/4, SHLDR, SS |
| 1000 | ----- | 0 | Refer to: Electrical Group |

Wheel and Tire Group

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 5901962



Wheel and Tire Group

| REF NO | PART NO | QTY | DESCRIPTION |
|--------|-----------|-----|---|
| 1 | 5107289 | 2 | BOLT, 5/8-11 X 8-1/2, CZ |
| 2 | 5025403 | 2 | NUT, 5/8-11 HEX NYLOCK FLANGE |
| 3 | 5020601 | 8 | NUT, 1/2-20, FOR WHEEL BOLT SILVER |
| 4 | 5109161 | 2 | TIRE ASM, 22 X 11-10, VIKING BLACK |
| 4-1 | 5107875X1 | 2 | TIRE, 22-11.00 X 10, 4-PLY (TIRE ONLY) -(One per tire) |
| 4-2 | ----- | 2 | WHEEL RIM -(Not available for sale. Refer to Complete Tire Assembly) |
| 5 | 5109159 | 2 | TIRE ASM, 13 X 6.5-6, VIKING BLACK |
| 5-1 | 5107876X1 | 2 | TIRE, 13/650 X 6 4-PLY SMOOTH, TIRE ONLY -(One per tire) |
| 5-2 | ----- | 2 | WHEEL RIM -(Not available for sale. Refer to Complete Tire Assembly) |
| 5-3 | 5107876X3 | 2 | 2 ROLLER BEARINGS, SPANNER, 2 BUSHINGS -(One per tire) |

Not For Reproduction

Hardware Identification & Torque Specifications

| Torque Specification Chart | | | | | | | | |
|--|-----------|------|-----------|------|------------|------|------------|------|
| FOR STANDARD METRIC MACHINE HARDWARE (Tolerance ± 20%) | | | | | | | | |
| Property Class | 5.6 | | 8.8 | | 10.9 | | 12.9 | |
| | Class 5.6 | | Class 8.8 | | Class 10.9 | | Class 12.9 | |
| Size Of Hardware | in/lbs | Nm. | in/lbs | Nm. | in/lbs | Nm. | in/lbs | Nm. |
| | ft/lbs | | ft/lbs | | ft/lbs | | ft/lbs | |
| M3 | 5.88 | .56 | 13.44 | 1.28 | 19.2 | 1.80 | 22.92 | 2.15 |
| M4 | 13.44 | 1.28 | 30.72 | 2.90 | 43.44 | 4.10 | 52.56 | 4.95 |
| M5 | 26.4 | 2.50 | 60.96 | 5.75 | 5.97 | 8.10 | 7.15 | 9.7 |
| M6 | 44.64 | 4.3 | 7.3 | 9.9 | 10.3 | 14 | 12.1 | 16.5 |
| M7 | 5.2 | 7.1 | 12.1 | 16.5 | 16.9 | 23 | 19.9 | 27 |
| M8 | 7.7 | 10.5 | 17.7 | 24 | 25 | 34 | 29 | 40 |
| M10 | 15 | 21 | 35 | 48 | 50 | 67 | 59 | 81 |
| M12 | 26 | 36 | 61 | 83 | 86.2 | 117 | 103 | 140 |
| M14 | 42 | 58 | 101 | 132 | 136 | 185 | 162 | 220 |
| M16 | 64 | 88 | 147 | 200 | 210 | 285 | 250 | 340 |
| M18 | 89 | 121 | 202 | 275 | 287 | 390 | 346 | 470 |
| M20 | 126 | 171 | 290 | 390 | 405 | 550 | 486 | 660 |
| M22 | 169 | 230 | 390 | 530 | 559 | 745 | 656 | 890 |
| M24 | 217 | 295 | 497 | 375 | 708 | 960 | 840 | 1140 |
| M27 | 320 | 435 | 733 | 995 | 1032 | 1400 | 1239 | 1680 |
| M30 | 435 | 590 | 995 | 1350 | 1401 | 1900 | 1681 | 2280 |
| M33 | 590 | 800 | 1349 | 1830 | 1902 | 2580 | 2278 | 3090 |
| M36 | 759 | 1030 | 1740 | 2360 | 2441 | 3310 | 2935 | 3980 |
| M39 | 988 | 1340 | 2249 | 3050 | 3163 | 4290 | 3798 | 5150 |

| Torque Specification Chart | | | | | | |
|---|-------------|-------|-------------|-------|-------------|---------|
| FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%) | | | | | | |
| Hardware Grade | No Marks | | SAE Grade 5 | | SAE Grade 8 | |
| | SAE Grade 2 | | SAE Grade 5 | | SAE Grade 8 | |
| Size Of Hardware | in/lbs | Nm. | in/lbs | Nm. | in/lbs | Nm. |
| | ft/lbs | | ft/lbs | | ft/lbs | |
| 8-32 | 19 | 2.1 | 30 | 3.4 | 41 | 4.6 |
| 8-36 | 20 | 2.3 | 31 | 3.5 | 43 | 4.9 |
| 10-24 | 27 | 3.1 | 43 | 4.9 | 60 | 6.8 |
| 10-32 | 31 | 3.5 | 49 | 5.5 | 68 | 7.7 |
| 1/4-20 | 66 | 7.6 | 8 | 10.9 | 12 | 16.3 |
| 1/4-28 | 76 | 8.6 | 10 | 13.6 | 14 | 19.0 |
| 5/16-18 | 11 | 15.0 | 17 | 23.1 | 25 | 34.0 |
| 5/16-24 | 12 | 16.3 | 19 | 25.8 | 29 | 34.0 |
| 3/8-16 | 20 | 27.2 | 30 | 40.8 | 45 | 61.2 |
| 3/8-24 | 23 | 31.3 | 35 | 47.6 | 50 | 68.0 |
| 7/16-14 | 30 | 40.8 | 50 | 68.0 | 70 | 95.2 |
| 7/16-20 | 35 | 47.6 | 55 | 74.8 | 80 | 108.8 |
| 1/2-13 | 50 | 68.0 | 75 | 102.0 | 110 | 149.6 |
| 1/2-20 | 55 | 74.8 | 90 | 122.4 | 120 | 163.2 |
| 9/16-12 | 65 | 88.4 | 110 | 149.6 | 150 | 204.0 |
| 9/16-18 | 75 | 102.0 | 120 | 163.2 | 170 | 231.2 |
| 5/8-11 | 90 | 122.4 | 150 | 204.0 | 220 | 299.2 |
| 5/8-18 | 100 | 136 | 180 | 244.8 | 240 | 326.4 |
| 3/4-10 | 160 | 217.6 | 260 | 353.6 | 386 | 525.0 |
| 3/4-16 | 180 | 244.8 | 300 | 408.0 | 420 | 571.2 |
| 7/8-9 | 140 | 190.4 | 400 | 544.0 | 600 | 816.0 |
| 7/8-14 | 155 | 210.8 | 440 | 598.4 | 660 | 897.6 |
| 1-8 | 220 | 299.2 | 580 | 788.8 | 900 | 1,244.0 |
| 1-12 | 240 | 326.4 | 640 | 870.4 | 1,000 | 1,360.0 |

The guides and ruler furnished below are designed to help you select the appropriate hardware.

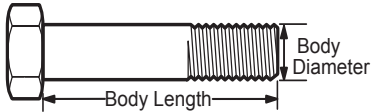


Nut, M8

Thread Diameter (mm)

Inside Diameter (in) Threads per inch

Nut, 1/2-16

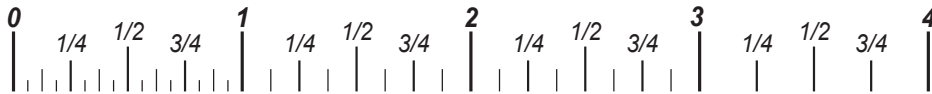


Screw, M8- 1.25 x 25

Thread Diameter (mm) Distance between threads (mm) Body Length (mm)

Body Diameter Threads per inch Body Length (in)

Screw, 1/2- 16 x 2



Standard Hardware Sizing

When a washer or nut is identified as 1/2" (M8), this is the *Nominal size*, meaning the *inside diameter* is 1/2 inch (8mm metric thread diameter); if a second number is present it represents the *threads per inch* (distance between threads).

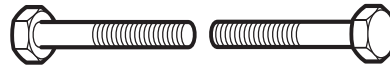
When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw, 2 inches (50mm).

NOTES

- These torque values are to be used for all hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
- Recommended seating torque values for locknuts:
 - for prevailing torque locknuts - use 65% of grade 5 torques.
 - for flange whizlock nuts and screws - use 135% of grade 5 torques.
- Unless otherwise noted on assembly drawings, all torque values must meet this specification.

Common Hardware Types

Hex Head Capscrew



Washer



Carriage Bolt



Hex Nut

Wrench & Fastener Size Guide

| | | | | |
|----------------------------------|----------------------------------|----------------------------------|--|---------------------------------|
| | | | | |
| 1/4" Bolt or Nut Wrench—7/16" | 5/16" Bolt or Nut Wrench—1/2" | 3/8" Bolt or Nut Wrench—9/16" | 7/16" Bolt or Nut Wrench (Bolt)—5/8" Wrench (Nut)—11/16" | 1/2" Bolt or Nut Wrench—3/4" |
| M6 Bolt or Nut Wrench—10mm | M8 Bolt or Nut Wrench—13mm | M10 Bolt or Nut Wrench—17mm | M12 Bolt or Nut Wrench—19mm | M14 Bolt or Nut Wrench—22mm |

