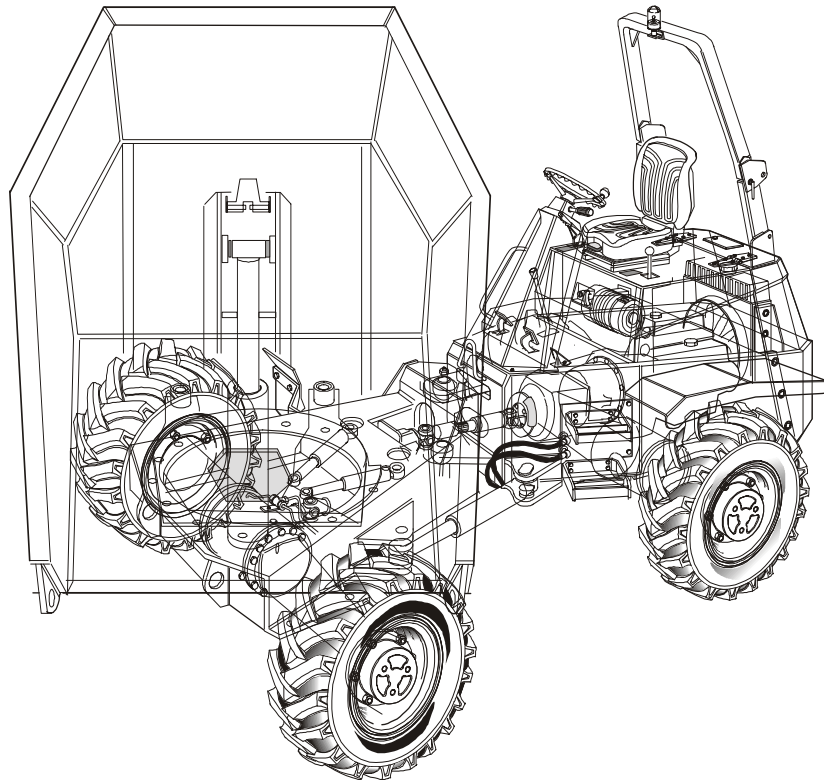
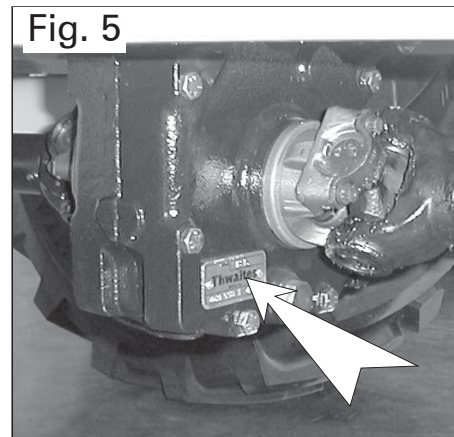
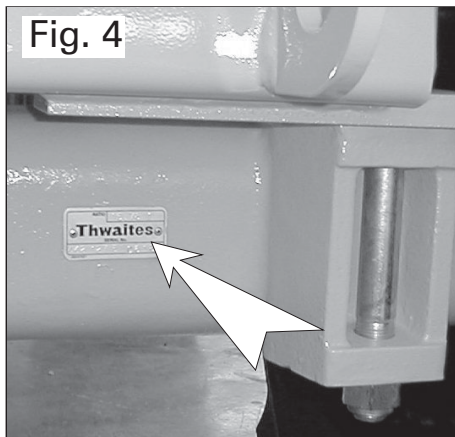
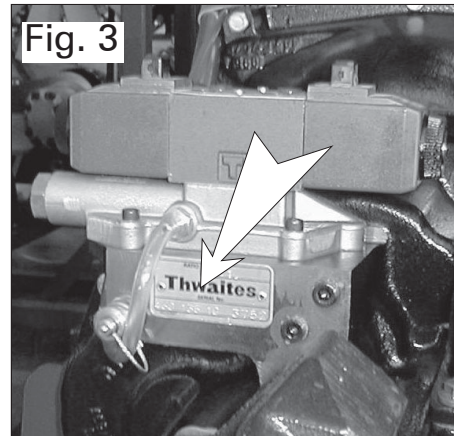
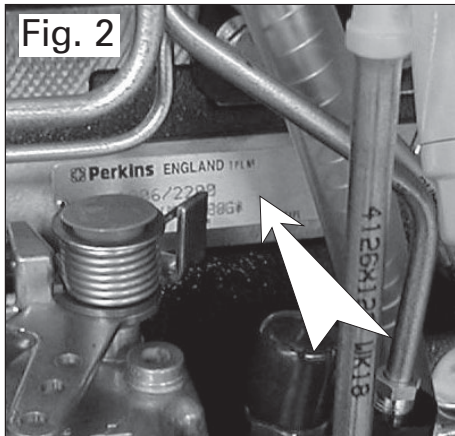


**Thwaites****255 - 5 TONNE POWERSWIVEL****allparts****Thwaites**  
**allparts**

Thwaites Ltd  
 Leamington Spa  
 Warwickshire  
 CV32 7NQ  
 Tel +44 (0)1926 422471  
 Fax +44 (0)1926 450458  
[www.thwaitesdumpers.co.uk](http://www.thwaitesdumpers.co.uk)

**FROM VIN No.** A0032**DATED** 25th APRIL 2001**VIN No.** A \_ \_ \_ \_**ENGINE BUILD No.** AR50820 - NAT/ASP**PAYLOAD** 5 TONNE**SKIP** POWERSWIVEL**TRANSMISSION** POWERSHUTTLE**TYPE** MACH 255**PREFIX No.** 02

**MACHINE IDENTIFICATION****Serial Numbers**

Please quote machine serial numbers when in communication with your Thwaites distributor.

Model Type (Fig 1.)

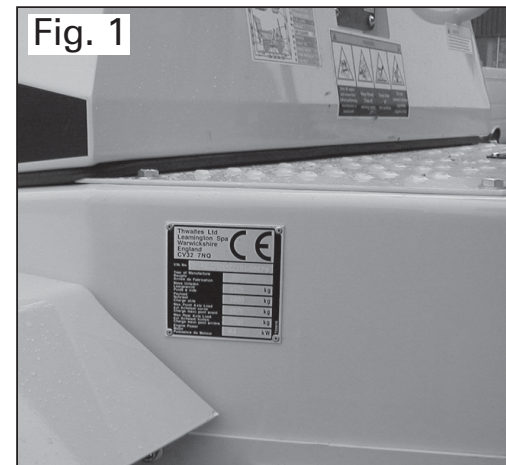
Vin N° (Fig 1.)

Engine Serial N° (Fig 2.)

Gearbox Serial N° (Fig 3.)

Front & Rear Axle Serial N° (Fig 4.)

Transfer Box/Drive Motor Serial N° (Fig 5.)



**VEHICLE IDENTIFICATION NUMBER - (VIN)**

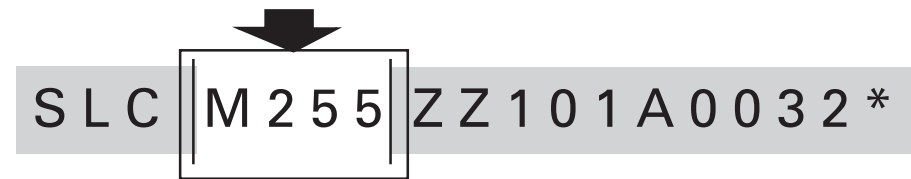
Thwaites have now adopted the international identification system known as VEHICLE IDENTIFICATION NUMBER normally referred to as VIN.



The VIN number incorporates a number of security features and also the machine model and individual serial number.

**Important note:** *Do not use this parts manual to order replacement spares if the prefix level of your machine is higher than the number quoted at the front of this parts manual.*

When ordering replacement spares it is important that the model or MACH number is used to identify the correct parts manual.



The year of manufacture:



The Machine Parts Manual issue level denoted by the two digit Prefix Number:

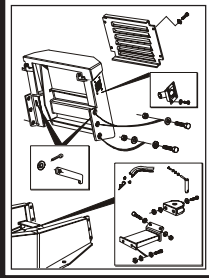


The unique machine serial number:



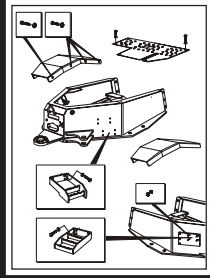
Please ensure that these numbers are quoted in all correspondence with your Thwaites distributor.

## REAR COVER ASSEMBLY



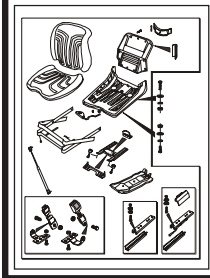
PAGE 1

## REAR CHASSIS ASSEMBLY



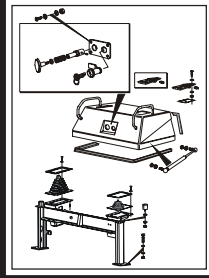
PAGE 2

## SEAT ASSEMBLY



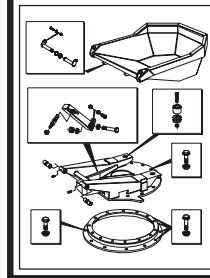
PAGE 3

## ENGINE COVER ASSEMBLY



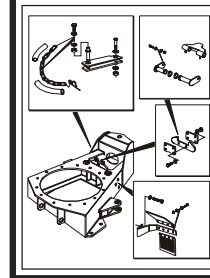
PAGE 4

## SKIP & SUB CHASSIS



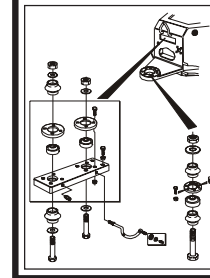
PAGE 5

## FRONT CHASSIS ASSEMBLY



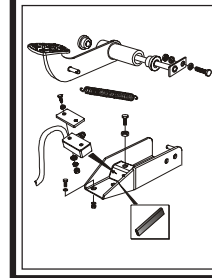
PAGE 6

## KINGLINK ASSEMBLY



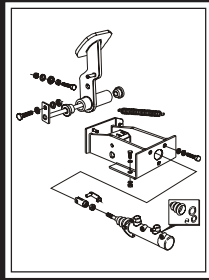
PAGE 7

## DUMP PEDAL ASSEMBLY



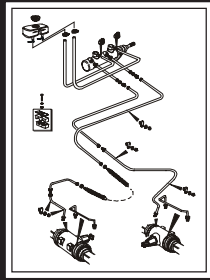
PAGE 8

## BRAKE PEDAL ASSEMBLY



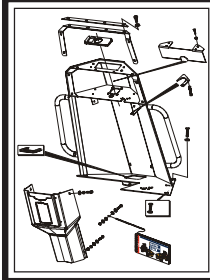
PAGE 9

## BRAKE CIRCUIT POWERSWIVEL



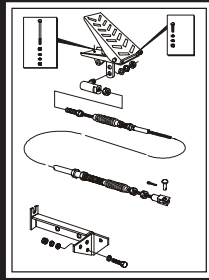
PAGE 10

## LEG GUARD ASSEMBLY



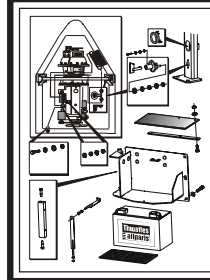
PAGE 11

## THROTTLE ASSEMBLY



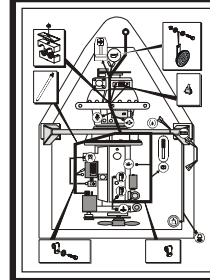
PAGE 12

## BATTERY BOX ASSEMBLY



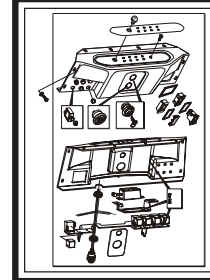
PAGE 13

## ENGINE HARNESS



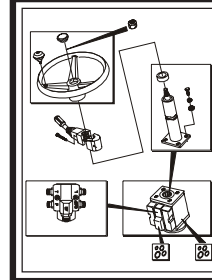
PAGE 14

## DASH PANEL ASSEMBLY



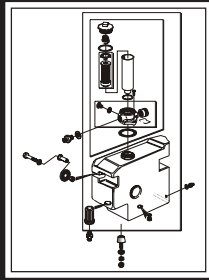
PAGE 15

## STEERING ASSEMBLY



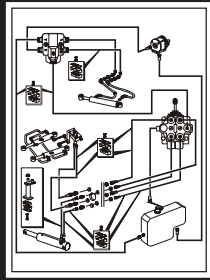
PAGE 16

## HYD. TANK ASSEMBLY



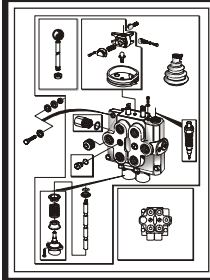
PAGE 17

## HYDRAULIC CIRCUIT



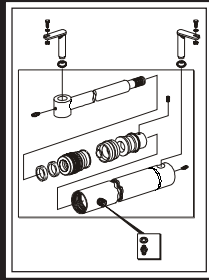
PAGE 18

## TIPPING VALVE ASSEMBLY



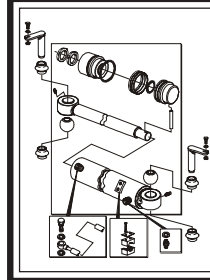
PAGE 19

## TIPPING RAM ASSEMBLY



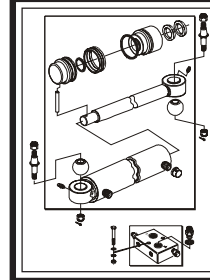
PAGE 20

## STEERING RAM ASSEMBLY



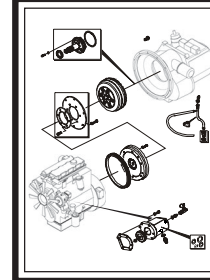
PAGE 21

## SLEW RAM ASSEMBLY



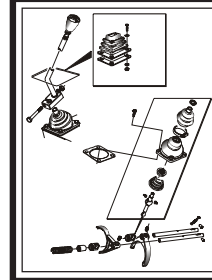
PAGE 22

## TRANS. DRIVE & HYD. PUMP



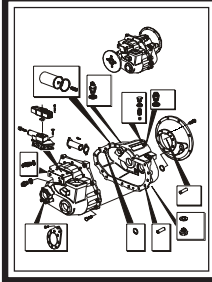
PAGE 23

## TRANSMISSION GEAR CHANGE



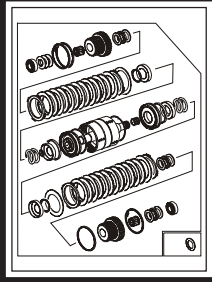
PAGE 24

**TRANSMISSION  
EXTERNAL**



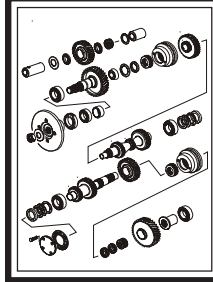
PAGE 25

**TRANSMISSION  
REVERSE UNIT**



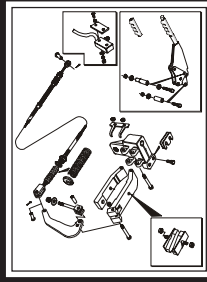
PAGE 26

**TRANSMISSION  
INTERNAL**



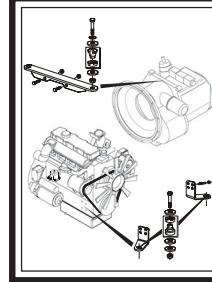
PAGE 27 & 28

**HANDBRAKE  
ASSEMBLY**



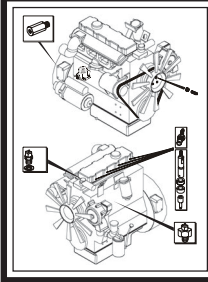
PAGE 29 & 30

**ENGINE & G/BOX  
MOUNTINGS.**



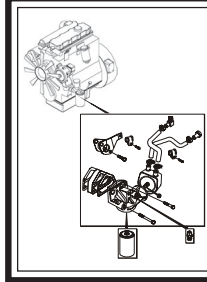
PAGE 31

**ENGINE  
ACCESSORIES**



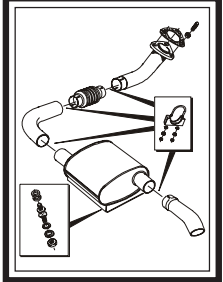
PAGE 32

**ENGINE  
OIL COOLER**



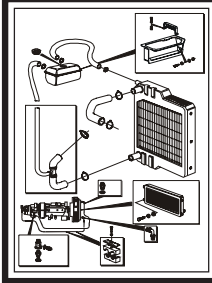
PAGE 33

**EXHAUST  
SYSTEM - N/A**



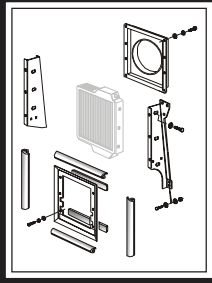
PAGE 34

**RADIATOR &  
OIL COOLER**



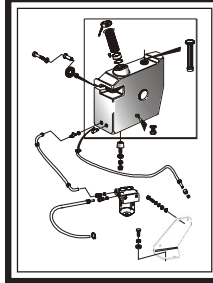
PAGE 35

**RAD. SEALS &  
FIXINGS**



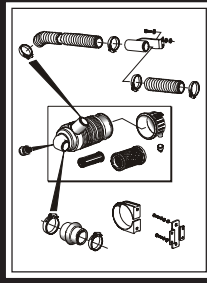
PAGE 36

**FUEL TANK  
ASSEMBLY**



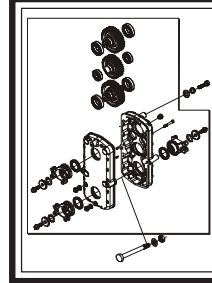
PAGE 37 & 38

**AIR CLEANER  
ASSEMBLY - N/A**



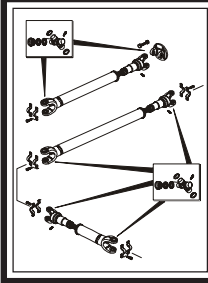
PAGE 39

**TRANSFER BOX  
ASSEMBLY**



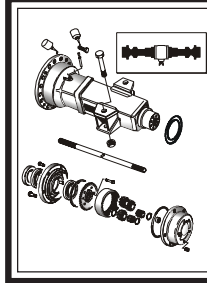
PAGE 40

**PROPSHAFTS**



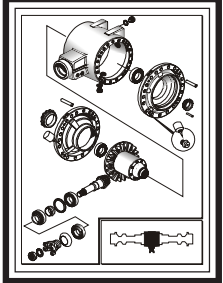
PAGE 41

**AXLE - DRIVE  
ASSEMBLY**



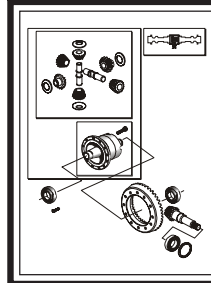
PAGE 42

**AXLE - DIFF  
ASSEMBLY**



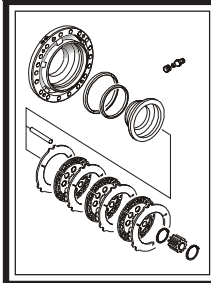
PAGE 43

**AXLE - CROWN  
WHEEL & PINION**



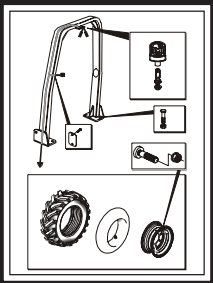
PAGE 44

**AXLE - BRAKES**



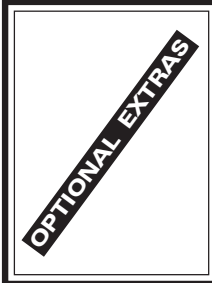
PAGE 45

**ROPS FRAME &  
WHEEL ASSY.**



PAGE 46

**OPTIONAL  
EXTRAS**



PAGE 47

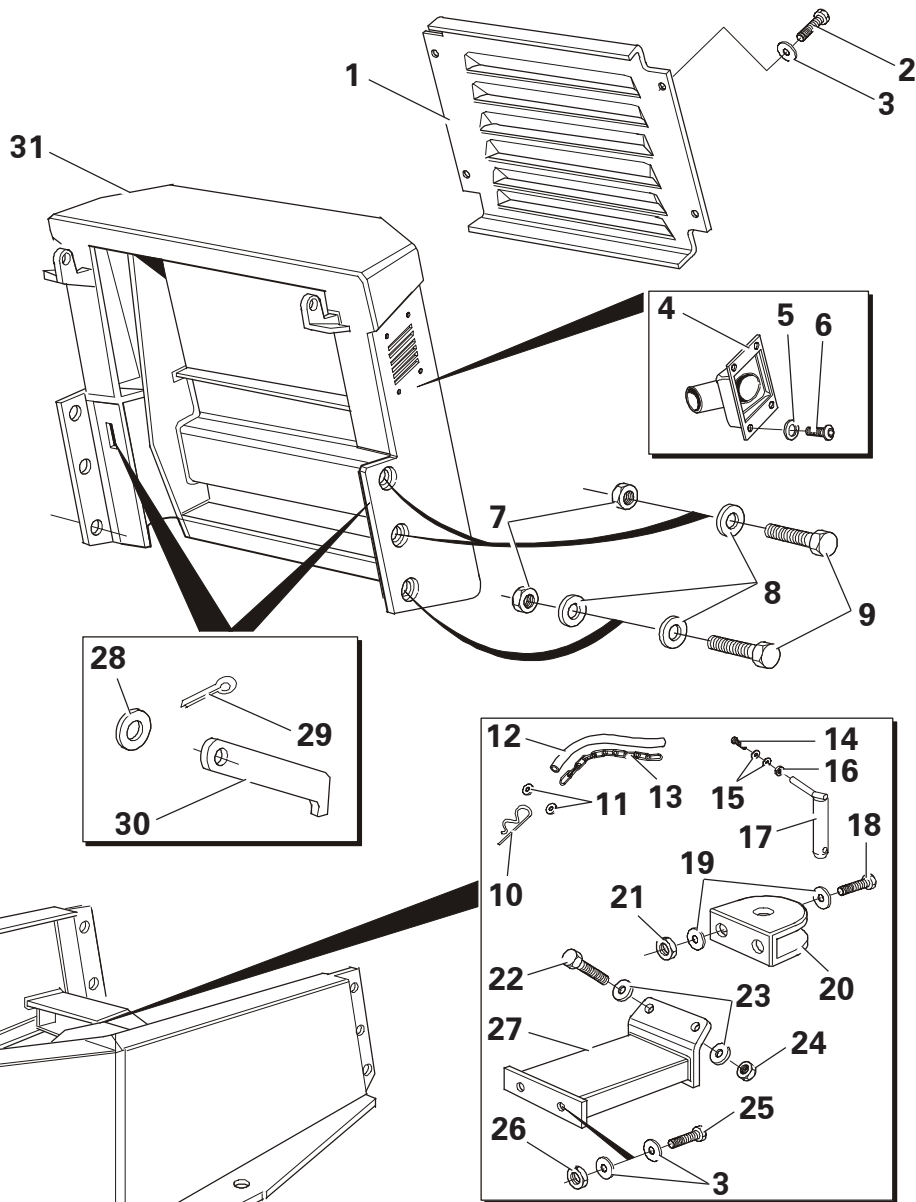
**MODIFICATIONS  
& ADDITIONS**



PAGE 48,49 & 50

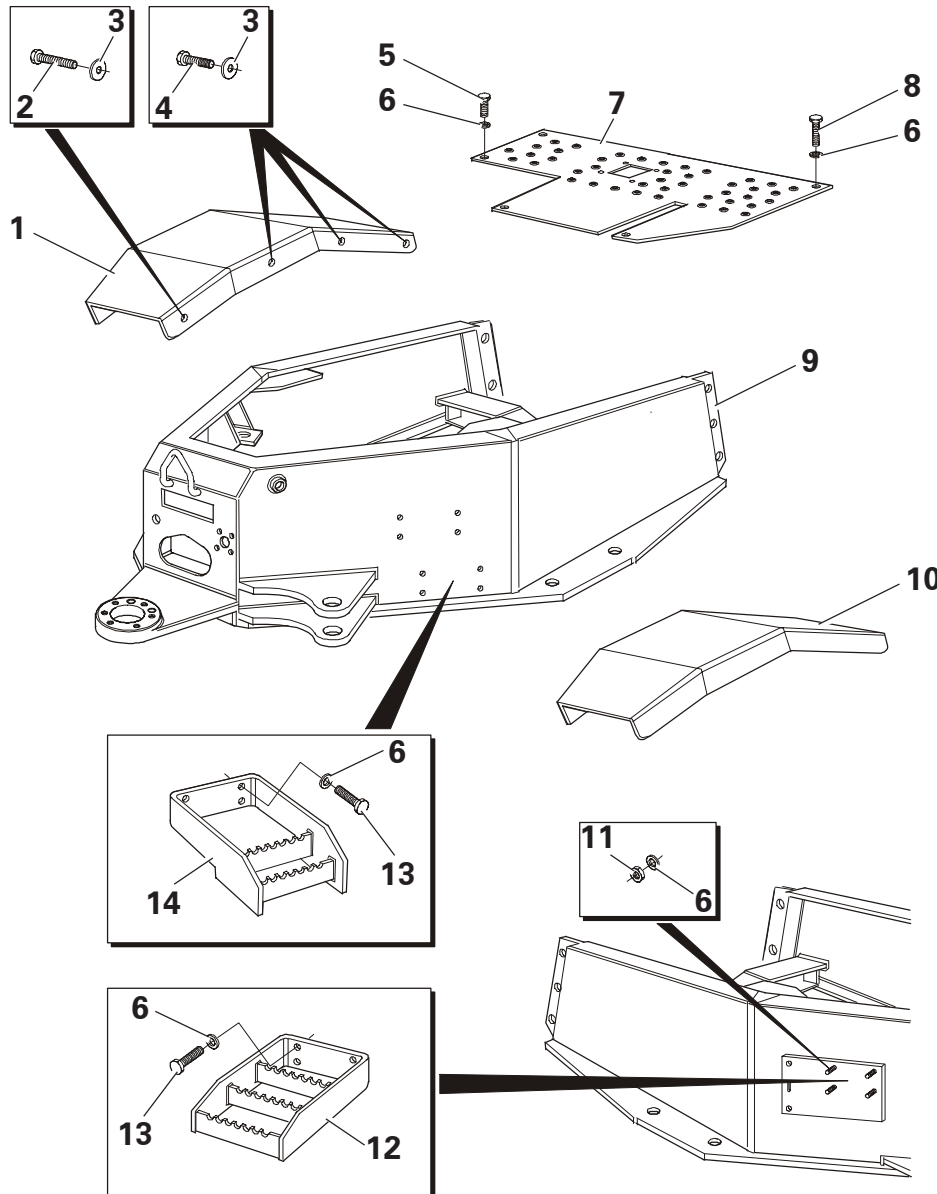
**REAR COVER ASSEMBLY**

Item	Part No.	Description	Qty	U/M
1	T100450	REAR PANEL	1.0	EA
2	T17846	BOLT	4.0	EA
3	T14748	PLAIN WASHER	8.0	EA
4	T100443	AIR INLET BOX	1.0	EA
5	T6701	FLAT WASHER	4.0	EA
6	T12971	BUTTON HEAD SCREW	4.0	EA
7	T20325	NUT	6.0	EA
8	T11811	WASHER	8.0	EA
9	T100310	BOLT	6.0	EA
10	T6075	LYNCH PIN	1.0	EA
11	T6668	WASHER	2.0	EA
12	T17508	CHAIN SLEEVE	1.0	EA
13	T17507	LOCKING PIN CHAIN	1.0	EA
14	T16477	BOLT	1.0	EA
15	T13911	FLAT WASHER	2.0	EA
16	T10431	NUT	1.0	EA
17	T100156	TOWING PIN	1.0	EA
18	T11315	BOLT	2.0	EA
19	T17600	PLAIN WASHER	4.0	EA
20	T100155	TOWING JAW	1.0	EA
21	T14910	STOVER NUT	2.0	EA
22	T16505	SET BOLT	2.0	EA
23	T17184	HEAVY DUTY WASHER	4.0	EA
24	T13064	NUT	2.0	EA
25	T14078	BOLT	2.0	EA
26	T16422	NYLOC NUT	2.0	EA
27	T100151	TOWING BRACKET	1.0	EA
28	T6768	WASHER	2.0	EA
29	T6751	SPLIT PIN	2.0	EA
30	T100466	STRAP RETAINER	2.0	EA
31	T100112	REAR COVER	1.0	EA



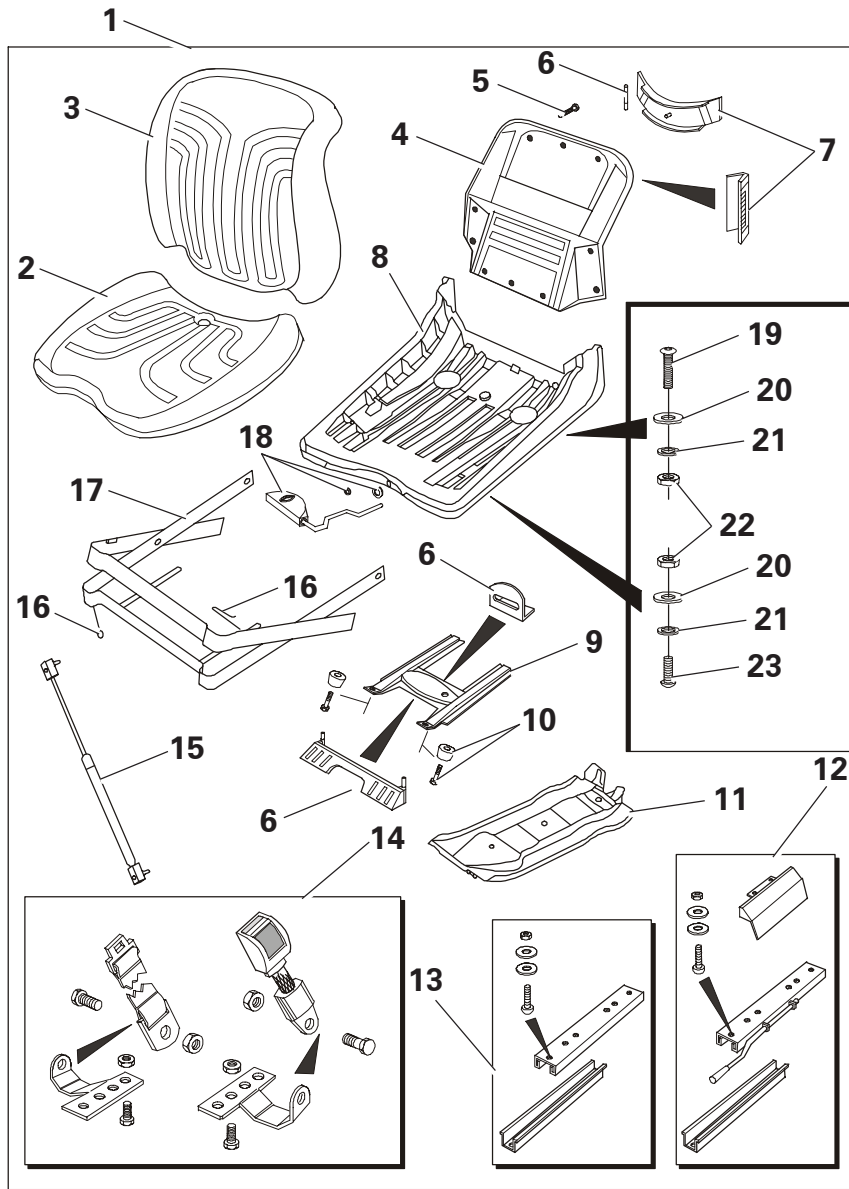
Rear Cover Assembly

## REAR CHASSIS ASSEMBLY



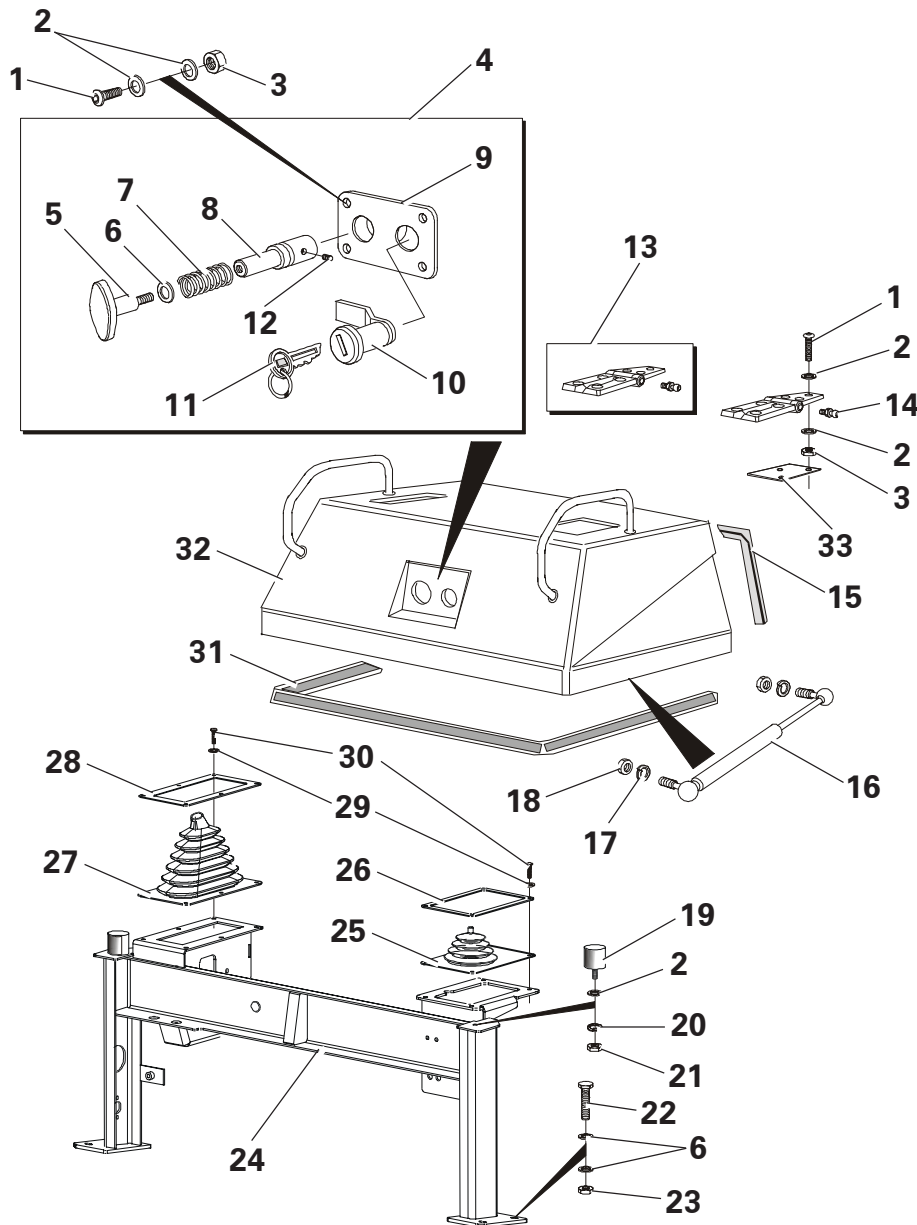
Item	Part No.	Description	Qty	U/M
1	T100145	REAR MUDGUARD R/H	1.0	EA
2	T14078	BOLT	2.0	EA
3	T14748	PLAIN WASHER	8.0	EA
4	T20618	SET SCREW	5.0	EA
5	T16670	SET BOLT	3.0	EA
6	T17184	HEAVY DUTY WASHER	21.0	EA
7	T100467	FLOORPLATE SHUTTLE	1.0	EA
8	T16500	BOLT	2.0	EA
9	T100111	REAR CHASSIS	1.0	EA
10	T100144	REAR MUDGUARD L/H	1.0	EA
11	T13064	NUT	4.0	EA
12	T100147	STEP (UPPER)	2.0	EA
13	T52599	FIXING BOLT	12.0	EA
14	T100148	STEP (LOWER)	2.0	EA

## SEAT ASSEMBLY



Item	Part No.	Description	Qty	U/M
1	T100024	SEAT-MSG20 C/W BELTS	1.0	EA
2	T52524	SEAT CUSHION VINYL	1.0	EA
3	T51918	UPHOLSTERED BACK REST	1.0	EA
4	T51919	PLATE	1.0	EA
5	T51920	SCREW SET	1.0	EA
6	T51928	FRAME KIT	1.0	EA
7	T51936	BLANKING COVERS	1.0	EA
8	T52525	SEAT PAN	1.0	EA
9	T52530	OUTER SWING ARM	1.0	EA
10	T51927	SCREW & WASHER SET	1.0	EA
11	T52529	INNER SWING ARM	1.0	EA
12	T51929	SLIDE RAIL KIT	1.0	EA
13	T51930	SLIDE RAIL	1.0	EA
14	T52536	SEAT BELT	1.0	EA
15	T52531	SHOCK ABSORBER	1.0	EA
16	T52526	REPAIR KIT	1.0	EA
17	T52527	SUSPENSION COVER	1.0	EA
18	T51921	LEVER	1.0	EA
19	T12971	BUTTON HEAD SCREW	2.0	EA
20	T9345	WASHER	4.0	EA
21	T12973	PLAIN WASHER	4.0	EA
22	T13457	NYLOC NUT	4.0	EA
23	T12832	DOME HEAD SCREW	2.0	EA

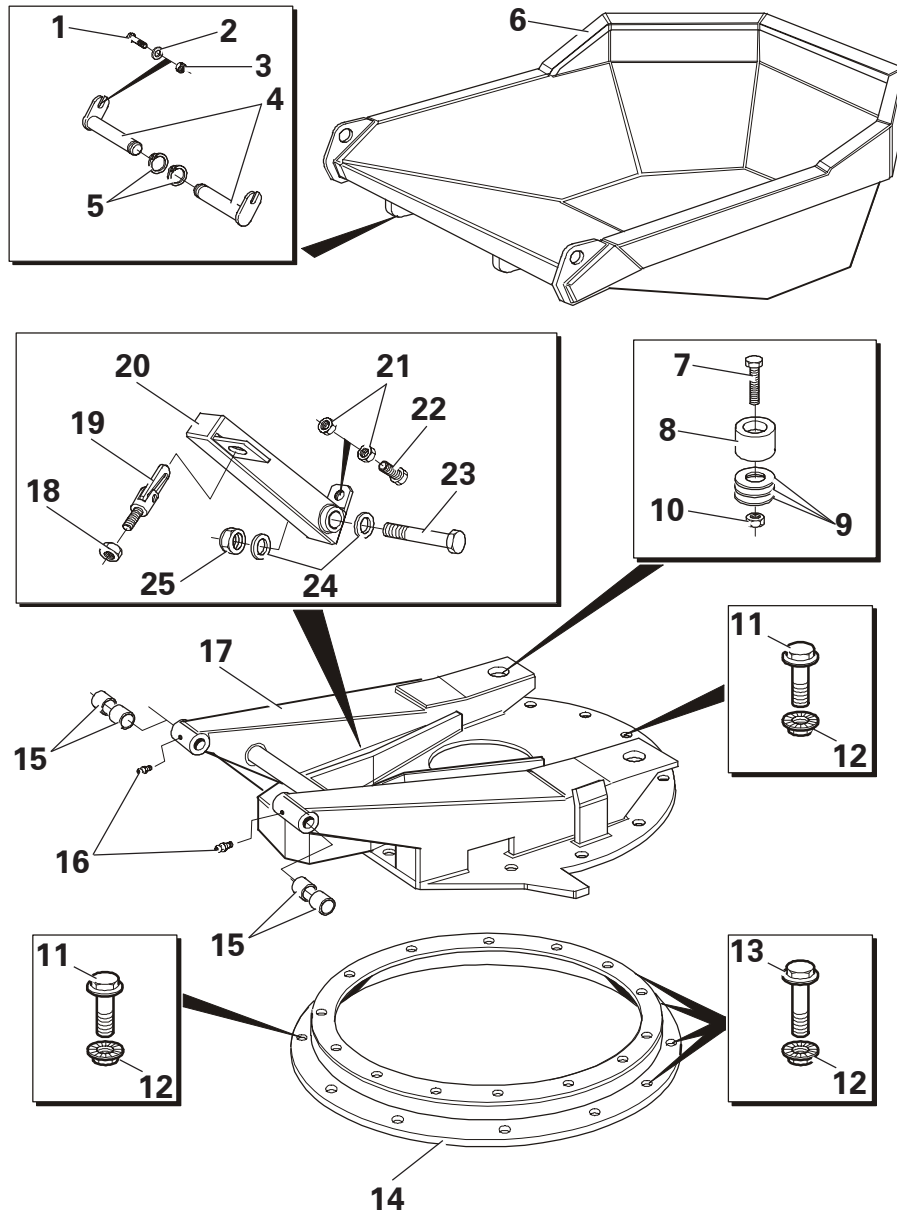
## ENGINE COVER ASSEMBLY



Item	Part No.	Description	Qty	U/M
1	T12971	BUTTON HEAD SCREW	16.0	EA
2	T12973	PLAIN WASHER	34.0	EA
3	T13457	NYLOC NUT	16.0	EA
4	T100211	LOCK ASSY	1.0	EA
5	T100216	RENCOL HANDLE	1.0	EA
6	T10734	H/DUTY WASHER	9.0	EA
7	T100287	SPRING	1.0	EA
8	T100266	LOCK PLUNGER	1.0	EA
9	T100286	WELDED LOCK ASSY	1.0	EA
10	T100265	COMPARTMENT LOCK	1.0	EA
11	T50479	SWITCH KEY	1.0	EA
12	T100477	GRUB SCREW	1.0	EA
13	T100212	HINGE WITH GREASE NIPPLE	2.0	EA
14	T16586	GREASE NIPPLE - STRAIGHT	2.0	EA
15	T100533	SEAL	1.0	EA
16	T100244	GAS STRUT	2.0	EA
17	T13362	SPRING WASHER	4.0	EA
18	T12509	NUT	4.0	EA
19	T100243	RUBBER BUFFER	2.0	EA
20	T12972	SPRING WASHER	2.0	EA
21	T9775	NUT	2.0	EA
22	T16505	SET BOLT	4.0	EA
23	T13064	NUT	4.0	EA
24	T100142	CONTROL MGT BRACE ASSY	1.0	EA
25	T100289	TIPPING LEVER GAITER	1.0	EA
26	T100569	GAITER RETAINING PLATE	1.0	EA
27	T100220	HANDBRAKE LEVER GAITER	1.0	EA
28	T100570	GAITER RETAINING PLATE	1.0	EA
29	T13911	FLAT WASHER	10.0	EA
30	T16492	DOME HEAD SCREW	10.0	EA
31	T100532	SEAL	1.0	EA
32	T100085	ENGINE COVER ASSY	1.0	EA
33	T100737	BONNET PACKER	2.0	EA

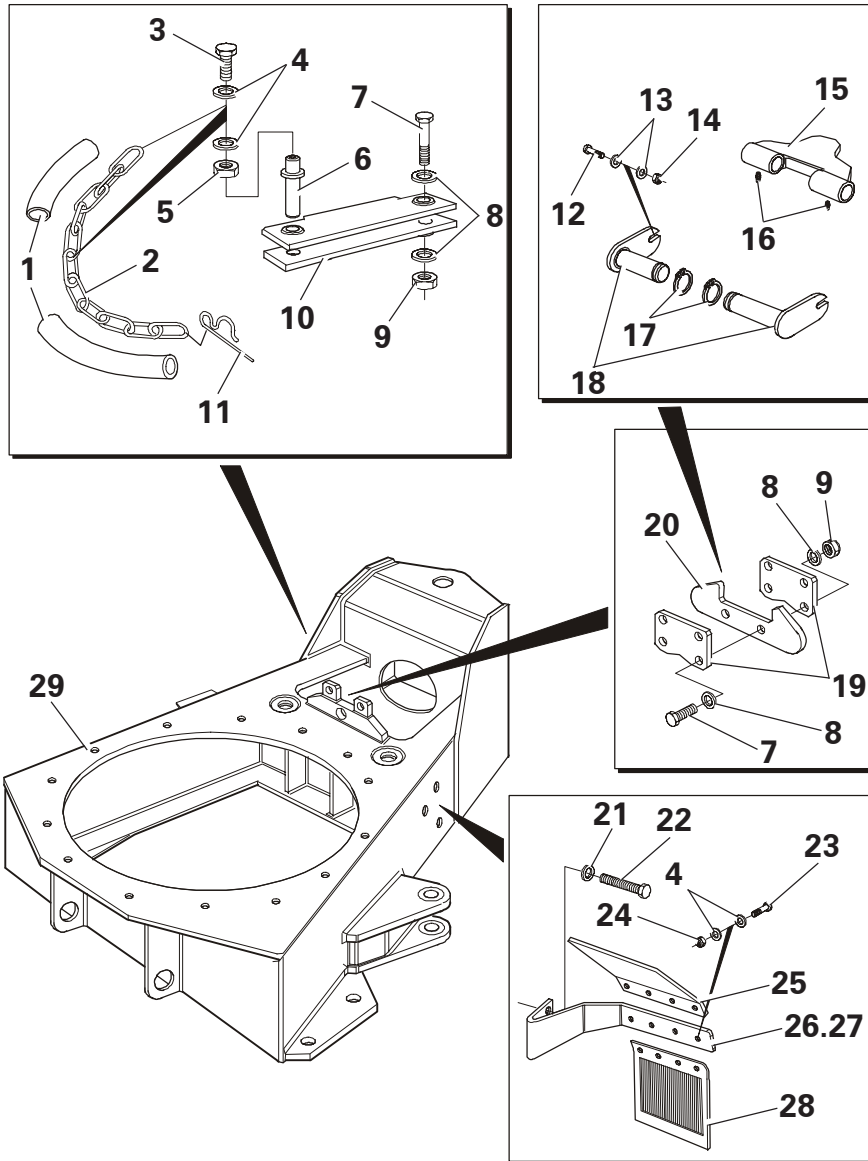
Engine Cover Assembly

## SKIP AND SUB CHASSIS



Item	Part No.	Description	Qty	U/M
1	T16505	SET BOLT	2.0	EA
2	T15819	PLAIN WASHER	2.0	EA
3	T13064	NUT	2.0	EA
4	T100087	SKIP PIVOT PIN	2.0	EA
5	T100099	CIRCLIP	2.0	EA
6	T100253	SKIP	1.0	EA
7	T14909	BOLT	2.0	EA
8	T100302	SKIP PAD	2.0	EA
9	T100578	SKIP PAD SPACER 3mm	A/R	EA
	T100303	SKIP PAD SPACER 5mm	A/R	EA
	T100386	SKIP PAD SPACER 10mm	A/R	EA
10	T14910	NUT	2.0	EA
11	T9926	BOLT DURLOCK	24.0	EA
12	T9928	DURLOCK NUT	28.0	EA
13	T9927	BOLT DURLOCK	4.0	EA
14	T100074	SLEW RING	1.0	EA
15	T100029	BUSH	4.0	EA
16	T16586	GREASE NIPPLE - STRAIGHT	2.0	EA
17	T100290	SUB-CHASSIS	1.0	EA
18	T14283	PHILIDAS NUT	1.0	EA
19	T100384	ANTI-LUCE FITTING	1.0	EA
20	T100235	SKIP PROP ASSY	1.0	EA
21	T12509	NUT	2.0	EA
22	T12761	BOLT	1.0	EA
23	T100404	BOLT	1.0	EA
24	T17306	PLAIN WASHER	2.0	EA
25	T20325	NUT	1.0	EA

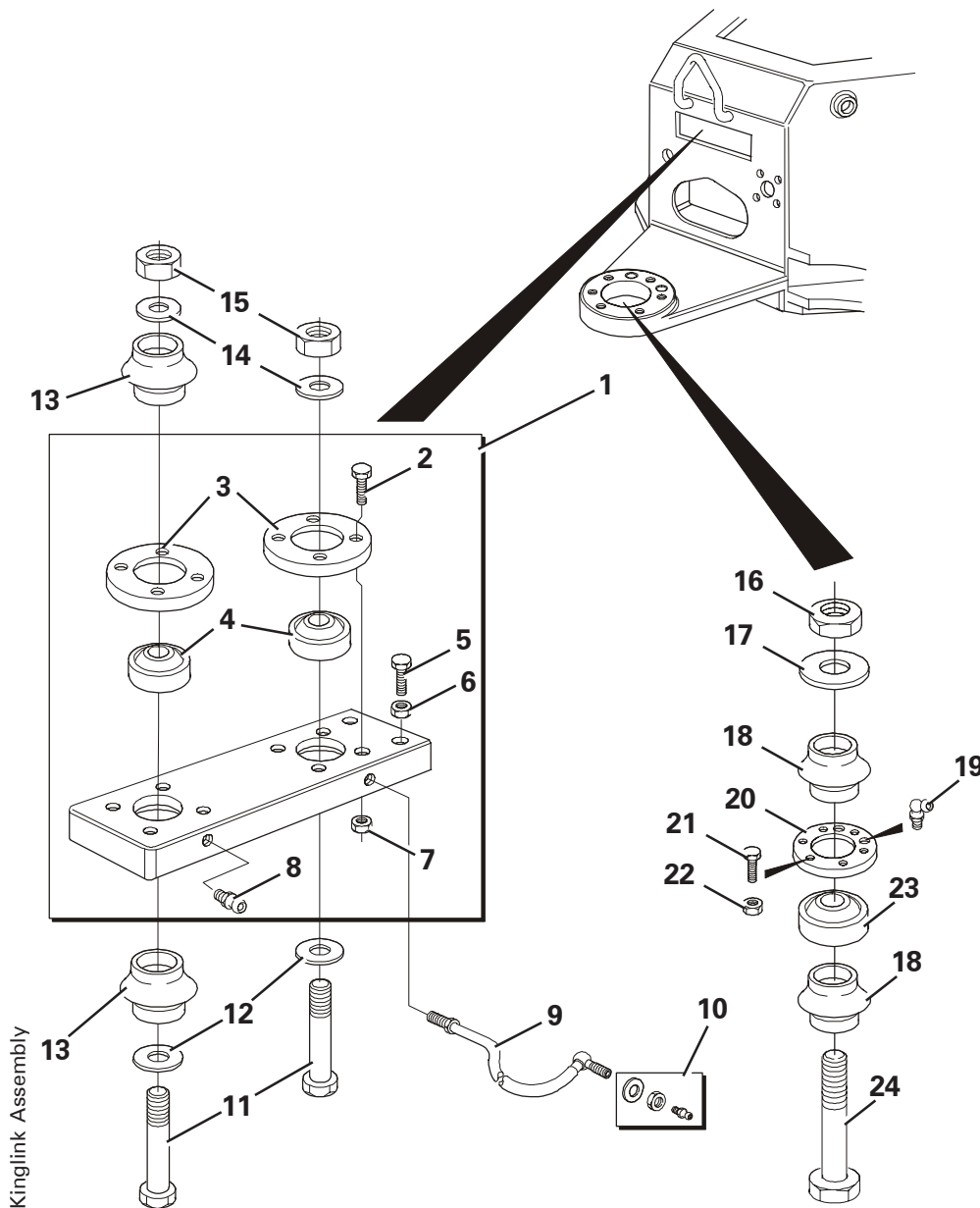
## FRONT CHASSIS ASSEMBLY



Item	Part No.	Description	Qty	U/M
1	T19465	CHAIN SLEEVE	1.0	EA
2	T18186	RETAINING CHAIN	1.0	EA
3	T16476	SET BOLT	2.0	EA
4	T13911	FLAT WASHER	16.0	EA
5	T10431	NUT	2.0	EA
6	T100103	CHASSIS LOCK PIN ASSY	1.0	EA
7	T100310	BOLT	5.0	EA
8	T17306	PLAIN WASHER	10.0	EA
9	T13739	NUT	5.0	EA
10	T100102	CHASSIS LOCK BAR ASSY	1.0	EA
11	T10012	LINCH PIN	1.0	EA
12	T16505	SET BOLT	2.0	EA
13	T15819	PLAIN WASHER	4.0	EA
14	T13064	NUT	2.0	EA
15	T100455	LATCH PLATE ASSY	1.0	EA
16	T16586	GREASE NIPPLE - STRAIGHT	2.0	EA
17	T100098	CIRCLIP	2.0	EA
18	T100088	PIVOT PIN	2.0	EA
19	T100449	CLAMP PLATE	2.0	EA
20	T100451	CAM PLATE	1.0	EA
21	T19809	WASHER	6.0	EA
22	T17846	BOLT	6.0	EA
23	T11433	SET SCREW	6.0	EA
24	T16481	NYLOC NUT	6.0	EA
25	T100305	MUDGUARD	2.0	EA
26	T100139	MUDFLAP SUPPORT BRKT L/H	1.0	EA
27	T100140	MUDFLAP SUPPORT BRKT R/H	1.0	EA
28	T100027	MUDFLAP RUBBER	2.0	EA
29	T100059	FRONT CHASSIS	1.0	EA

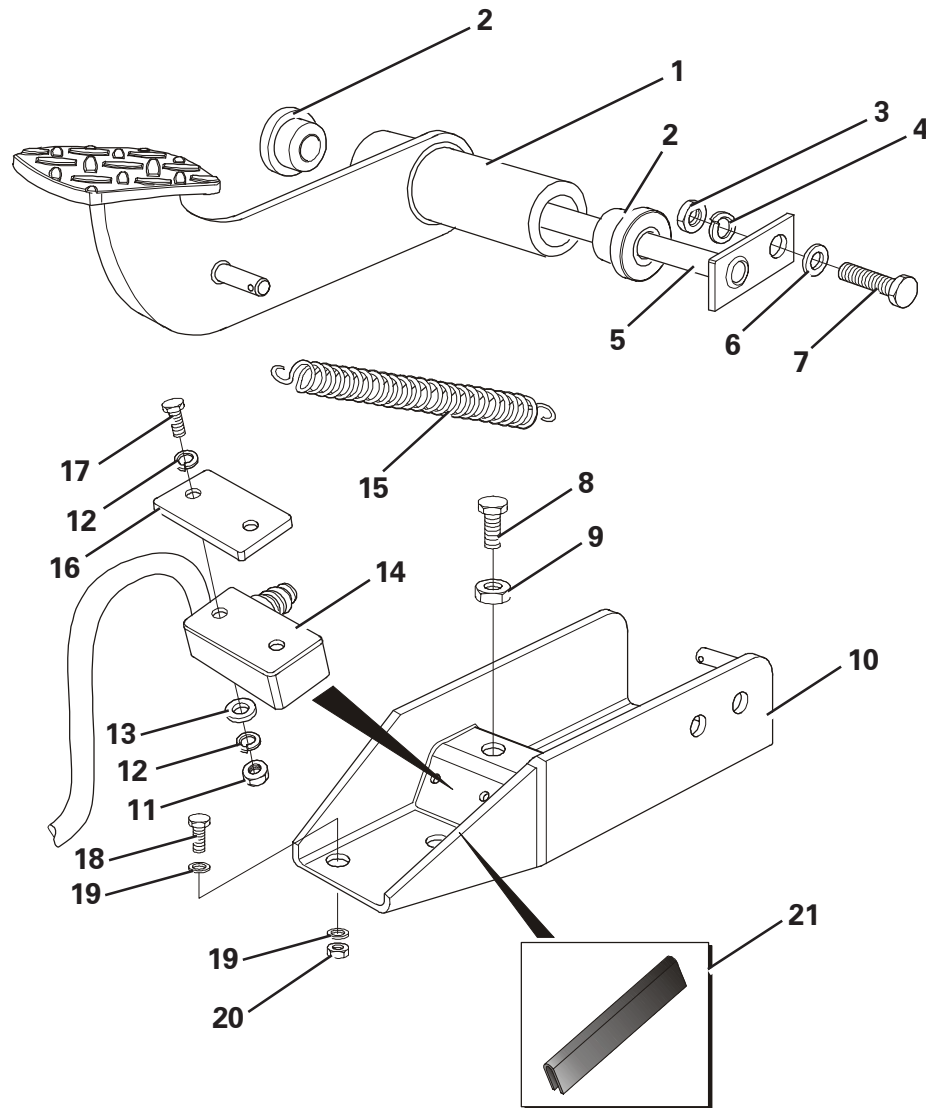
**KINGLINK ASSEMBLY**

Item	Part No.	Description	Qty	U/M
1	T52546	KINGLINK ASSEMBLY	1.0	EA
2	T12858	BOLT	8.0	EA
3	T12995	BEARING CAP KINGLINK	2.0	EA
4	T10323	SPHERICAL BEARING	2.0	EA
5	T14078	BOLT	2.0	EA
6	T16536	NUT	2.0	EA
7	T7631	PHILIDAS NUT	8.0	EA
8	T7486	STRAIGHT GREASE NIPPLE	1.0	EA
9	T100354	GREASE PIPE	1.0	EA
10	T52549	GREASE NIPPLE ASSEMBLY	1.0	EA
11	T100092	TOP PIVOT BOLT	2.0	EA
12	T8327	WASHER	2.0	EA
13	T10160	RUBBER DUST SEAL	2.0	EA
14	T7695	WASHER	2.0	EA
15	T10331	LOCKNUT	2.0	EA
16	T12981	PHILIDAS NUT	1.0	EA
17	T13173	PLAIN WASHER	1.0	EA
18	T100028	DUST SEAL	2.0	EA
19	T16576	GREASE NIPPLE	2.0	EA
20	T100137	BEARING CAP	1.0	EA
21	T12982	BOLT	6.0	EA
22	T7631	PHILIDAS NUT	6.0	EA
23	T12984	SPHERICAL PLAIN BEARING	1.0	EA
24	T100091	BOTTOM PIVOT BOLT	1.0	EA



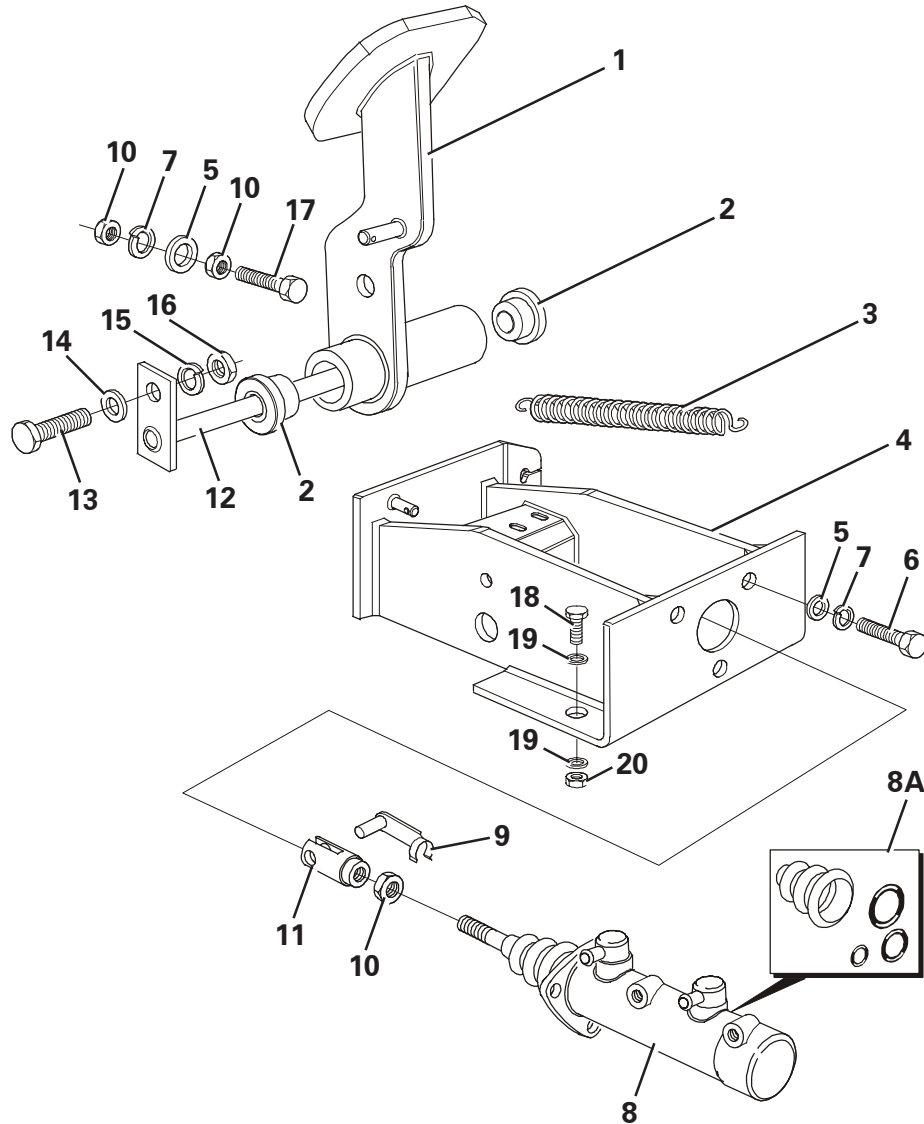
Kinglink Assembly

**DUMP PEDAL ASSEMBLY**



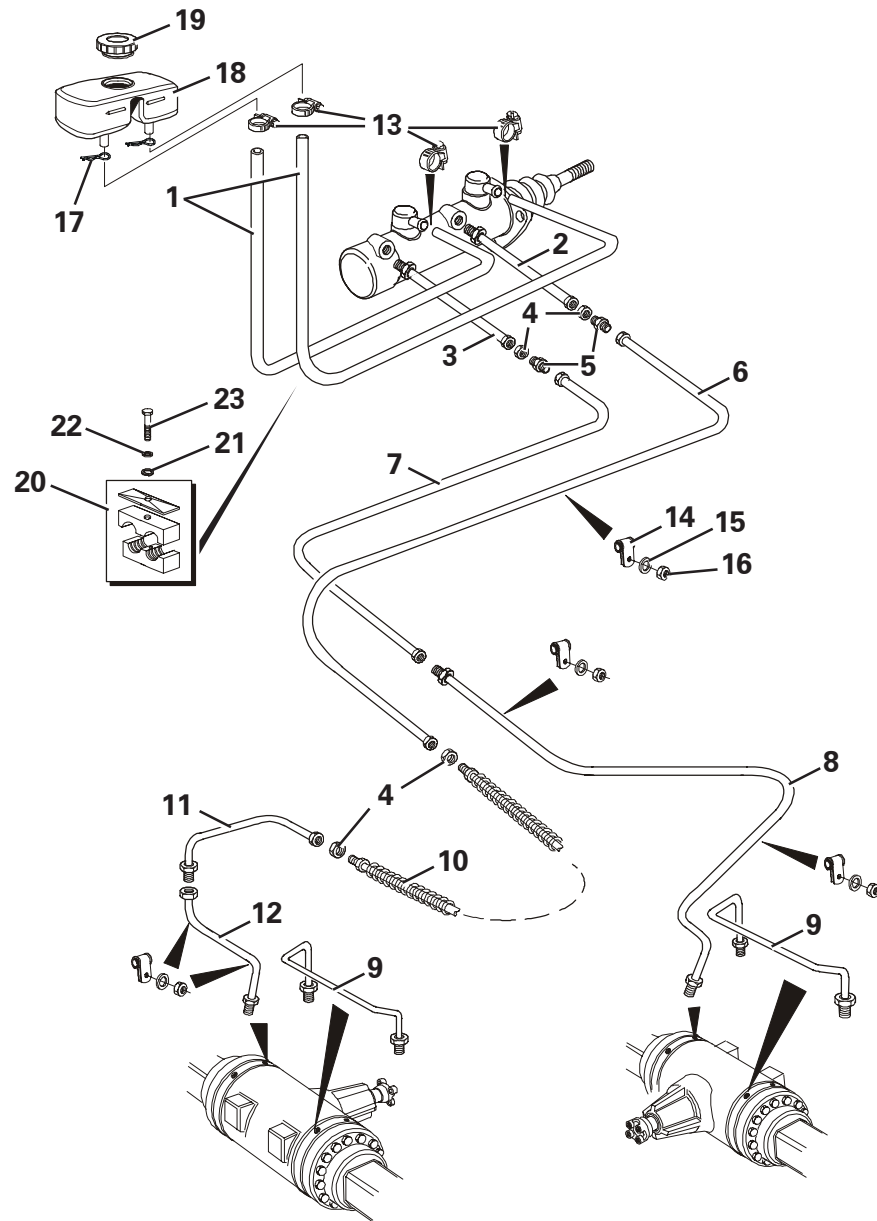
Item	Part No.	Description	Qty	U/M
1	T100094	DUMP VALVE PEDAL	1.0	EA
2	T100110	BUSH	2.0	EA
3	T10431	NUT	1.0	EA
4	T14837	SPRING WASHER PLATED	1.0	EA
5	T100096	PEDAL SHAFT	1.0	EA
6	T13911	DIA FLAT WASHER	1.0	EA
7	T16477	HEX HEAD BOLT	1.0	EA
8	T7465	SET SCREW PLATED	1.0	EA
9	T9775	NUT PLATED	1.0	EA
10	T100230	DUMP VALVE BRACKET	1.0	EA
11	T11447	NUT	2.0	EA
12	T11439	SPRING WASHER PLATED	4.0	EA
13	T11440	WASHER PLATED	2.0	EA
14	T100223	MICRO SWITCH	1.0	EA
15	T100319	DUMP PEDAL SPRING	1.0	EA
16	T13289	BACKING PLATE	1.0	EA
17	T13321	HEX HD SET SCREW	2.0	EA
18	T16505	SET BOLT	2.0	EA
19	T10734	H/DUTY WASHER	4.0	EA
20	T13064	NUT	2.0	EA
21	T52795	E J TRIM	1.0	EA

**BRAKE PEDAL ASSEMBLY**



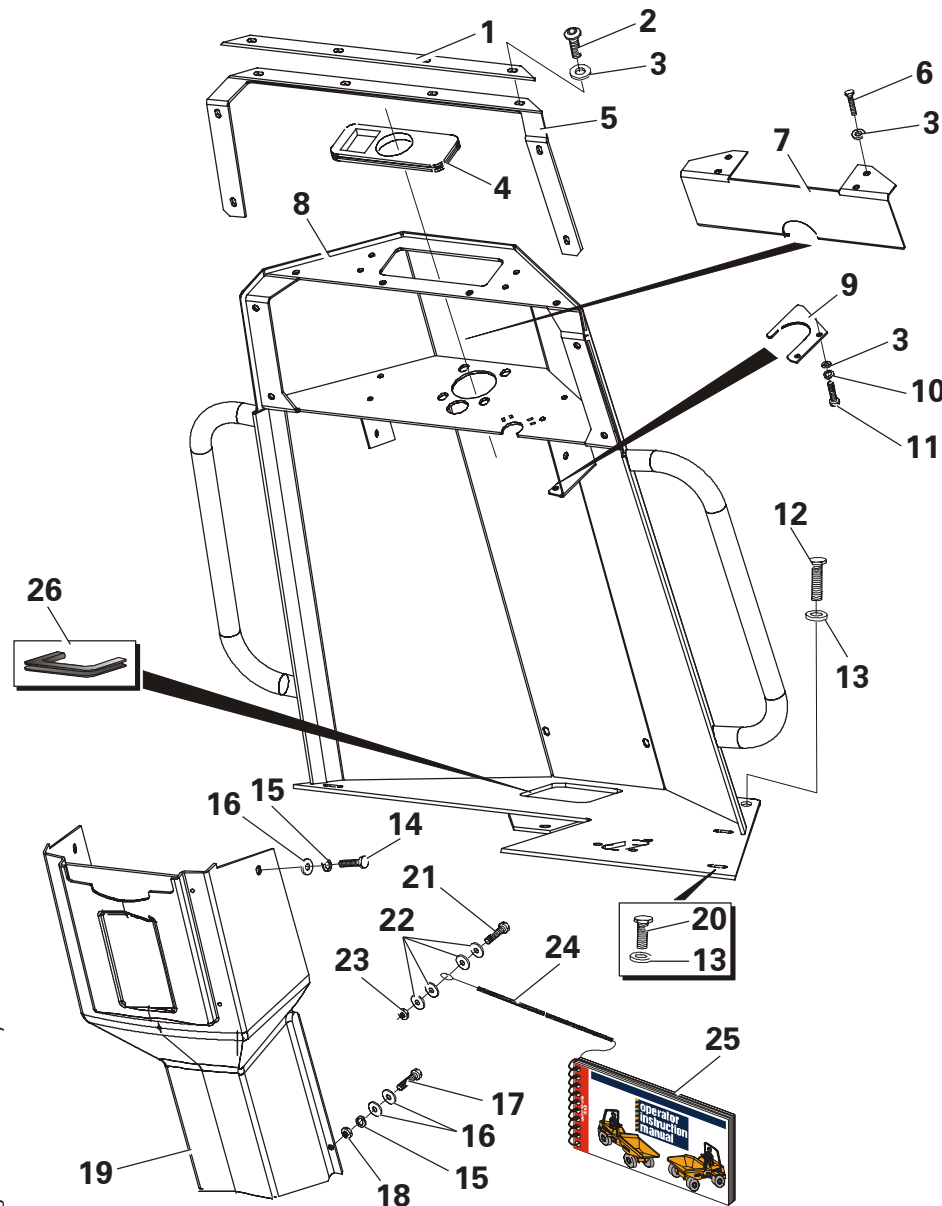
Item	Part No.	Description	Qty	U/M
1	T100093	BRAKE PEDAL	1.0	EA
2	T100110	BUSH	2.0	EA
3	T100318	BRAKE SPRING	1.0	EA
4	T100095	MASTER CYLINDER MTG BRKT	1.0	EA
5	T15819	PLAIN WASHER - PLATED	4.0	EA
6	T16505	HEX HD SET BOLT	3.0	EA
7	T13362	SPRING WASHER PLATED	4.0	EA
8	T100410	MASTER CYLINDER	1.0	EA
8A	T52603	SEAL KIT	1.0	EA
9	T100084	SPRING CLEVIS PIN	1.0	EA
10	T12509	NUT PLATED	3.0	EA
11	T100083	FORK END	1.0	EA
12	T100096	PEDAL SHAFT	1.0	EA
13	T16477	HEX HEAD BOLT	1.0	EA
14	T13911	DIA FLAT WASHER	1.0	EA
15	T14837	SPRING WASHER PLATED	1.0	EA
16	T10431	NUT	1.0	EA
17	T20618	SET SCREW LONG	1.0	EA
18	T16505	SET BOLT	2.0	EA
19	T10734	H/DUTY WASHER	4.0	EA
20	T13064	NUT	2.0	EA

## BRAKE CIRCUIT - POWERSWIVEL



Item	Part No.	Description	Qty	U/M
1	T19604	M/CYL-RES.HOSE	2.0	EA
2	T100692	BRAKE PIPE	1.0	EA
3	T100693	BRAKE PIPE	1.0	EA
4	T8942	LOCKNUT (GIRLING TYPE)	4.0	EA
5	T100697	BRAKE B/H UNION	2.0	EA
6	T100695	BRAKE PIPE	1.0	EA
7	T100694	BRAKE PIPE	1.0	EA
8	T100173	BRAKE PIPE	1.0	EA
9	T100174	BRAKE PIPE	2.0	EA
10	T100335	FLEXIBLE HOSE C/W NUTS	1.0	EA
11	T100369	BRAKE PIPE	1.0	EA
12	T100370	BRAKE PIPE	1.0	EA
13	T100421	SPRING BAND CLAMP	4.0	EA
14	T11452	PIPE CLIP	5.0	EA
15	T16612	PLAIN WASHER PLATED	5.0	EA
16	T16613	NYLOC NUT PLATED	5.0	EA
17	T52646	RESERVOIR 'P' CLIP	2.0	EA
18	T17916	BRAKE M/CYL.RESERVOIR	1.0	EA
19	T51682	RESERVOIR CAP	1.0	EA
20	T19060	PIPE CLAMP	1.0	EA
21	T12973	PLAIN WASHER	1.0	EA
22	T12972	SPRING WASHER	1.0	EA
23	T16494	SET BOLT	1.0	EA

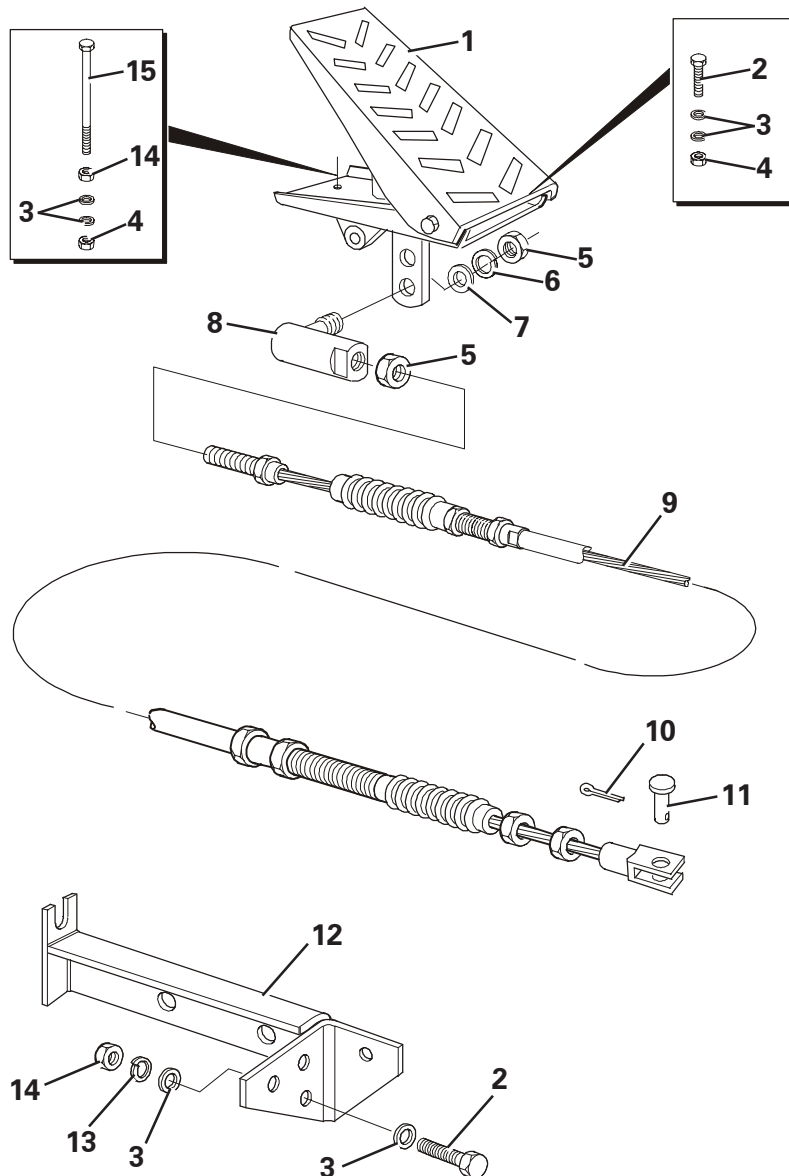
LEG GUARD ASSEMBLY



Item	Part No.	Description	Qty	U/M
1	T100506	CLAMPING STRIP	1.0	EA
2	T100315	SCREW	4.0	EA
3	T13911	FLAT WASHER	10.0	EA
4	T100355	STEERING GROMMET	1.0	EA
5	T100320	SEALING GASKET	1.0	EA
6	T16492	DOME HEAD SCREW	4.0	EA
7	T100540	SPLASH GUARD	1.0	EA
8	T100080	LEG GUARD	1.0	EA
9	T100667	HARNES MTG	1.0	EA
10	T14837	SPRING WASHER	2.0	EA
11	T10917	SET BOLT PLATED	2.0	EA
12	T16500	BOLT	2.0	EA
13	T10734	H/DUTY WASHER PLATED	5.0	EA
14	T10917	SET BOLT PLATED	2.0	EA
15	T10418	SHAKEPROOF WASHER	4.0	EA
16	T15830	FLAT WASHER	6.0	EA
17	T16477	HEX HEAD BOLT	2.0	EA
18	T10431	NUT	2.0	EA
19	T100159	INNER LEG GUARD	1.0	EA
20	T20618	SET SCREW	3.0	EA
21	T12694	SET SCREW	1.0	EA
22	T9345	WASHER	4.0	EA
23	T13457	NYLOC NUT	1.0	EA
24	T100699	RETAINING CABLE	1.0	EA
25	T100597	OPERATOR MANUAL	1.0	EA
26	T52795	E J TRIM	1.0	EA

Leg Guard Assembly

**THROTTLE ASSEMBLY**

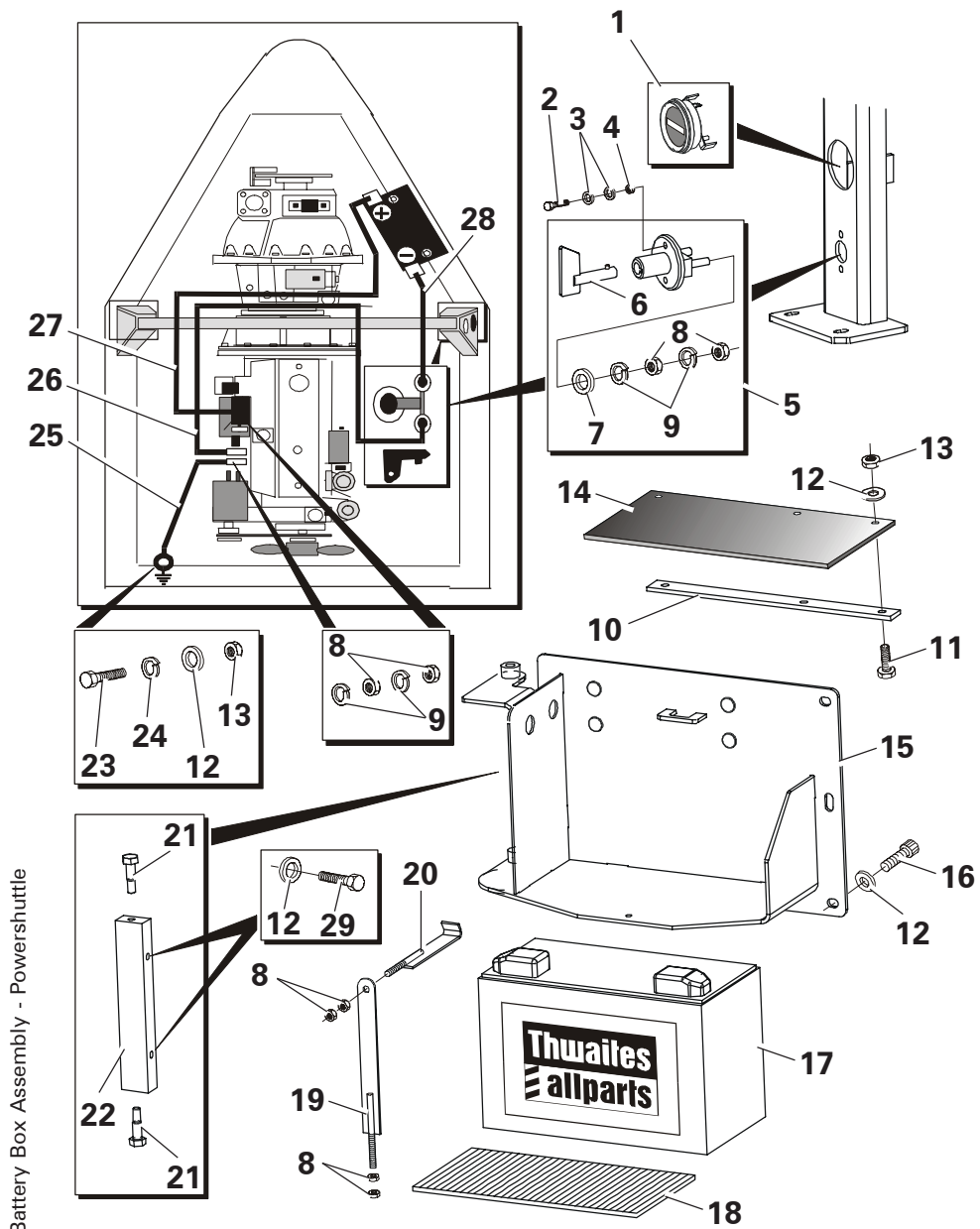


Item	Part No.	Description	Qty	U/M
1	T18931	ACCELERATOR PEDAL	1.0	EA
2	T16477	HEAD BOLT	5.0	EA
3	T13911	FLAT WASHER	12.0	EA
4	T16481	NYLOC NUT	3.0	EA
5	T10431	NUT	2.0	EA
6	T6738	SPRING WASHER	1.0	EA
7	T6762	FLAT WASHER	1.0	EA
8	T16192	AMEL END	1.0	EA
9	T100267	THROTTLE CABLE	1.0	EA
10	T6744	SPLIT PIN	1.0	EA
11	T13265	CLEVIS PIN	1.0	EA
12	T19228	THROTTLE REACTION BRKT	1.0	EA
13	T14837	SPRING WASHER	3.0	EA
14	T10431	NUT	4.0	EA
15	T16475	BOLT	1.0	EA

Throttle Assembly

**BATTERY BOX ASSEMBLY**

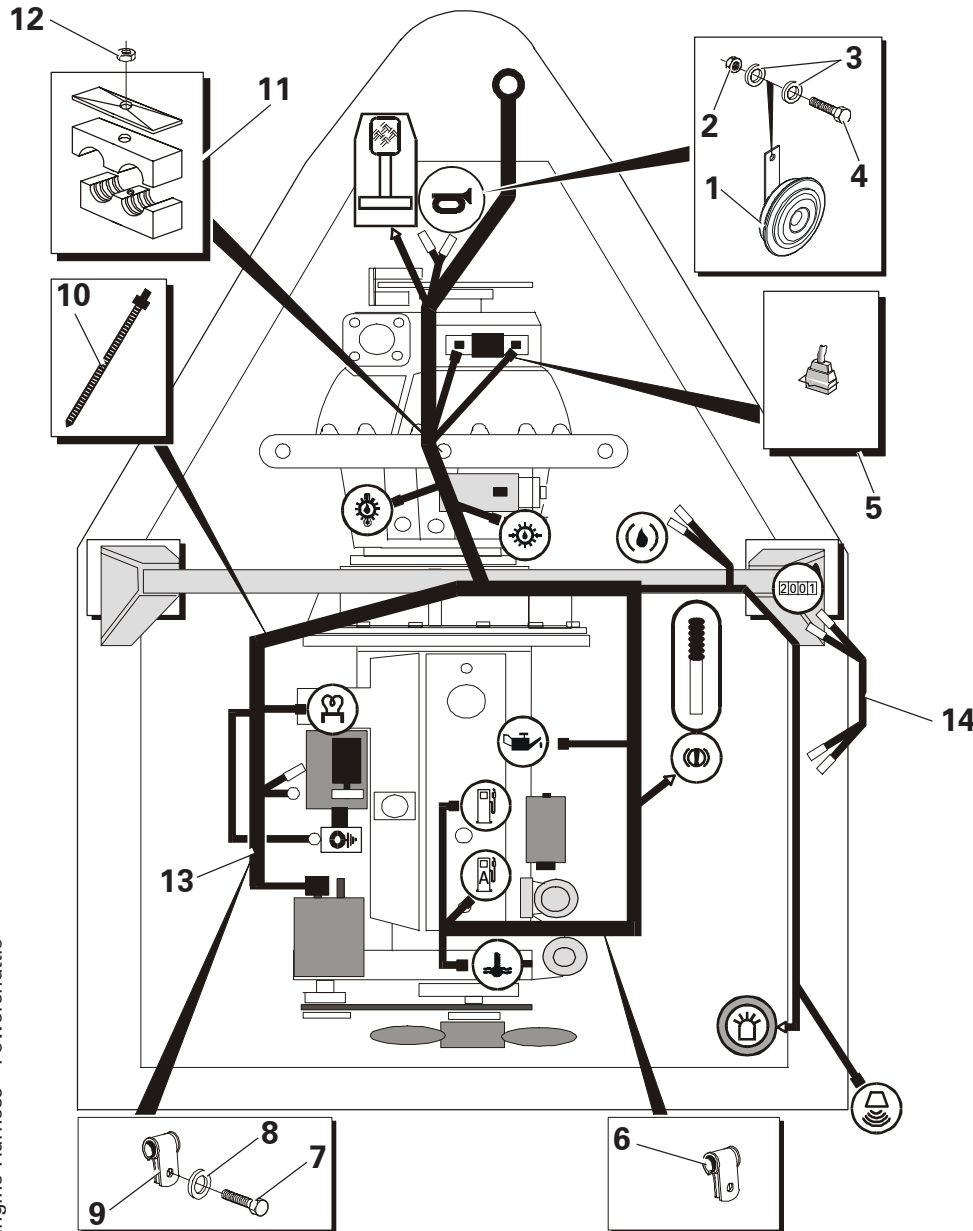
Item	Part No.	Description	Qty	U/M
1	T16538	HOURMETER	1.0	EA
2	T16611	SCREW	2.0	EA
3	T16612	PLAIN WASHER	4.0	EA
4	T16613	NYLOC NUT	2.0	EA
5	T20846	BATTERY ISOLATOR SWITCH	1.0	EA
6	T52600	KEY	1.0	EA
7	T12973	PLAIN WASHER	2.0	EA
8	T9775	NUT	12.0	EA
9	T12972	SPRING WASHER	8.0	EA
10	T100394	BATTERY COVER RETAINER	1.0	EA
11	T16505	SET BOLT	3.0	EA
12	T15819	PLAIN WASHER	8.0	EA
13	T12762	LOCKING NUT	4.0	EA
14	T100393	RUBBER BATTERY COVER	1.0	EA
15	T100301	BATTERY BOX	1.0	EA
16	T17842	CAPSCREW	2.0	EA
17	T8008	BATTERY	1.0	EA
18	T12874	BATTERY MAT	1.0	EA
19	T100433	BATTERY CLAMP	1.0	EA
20	T100432	BATTERY STOP TOP	1.0	EA
21	T100577	PIVOT PIN	2.0	EA
22	T100576	BATTERY BOX HINGE	1.0	EA
23	T20618	SET SCREW	1.0	EA
24	T13362	SPRING WASHER	1.0	EA
25	T100507	EARTH LEAD	1.0	EA
26	T100041	CABLE ISOLATOR NEGATIVE	1.0	EA
27	T100039	CABLE BATTERY POSITIVE	1.0	EA
28	T100040	CABLE BATTERY NEGATIVE	1.0	EA
29	T16771	CAP SCREW	2.0	EA



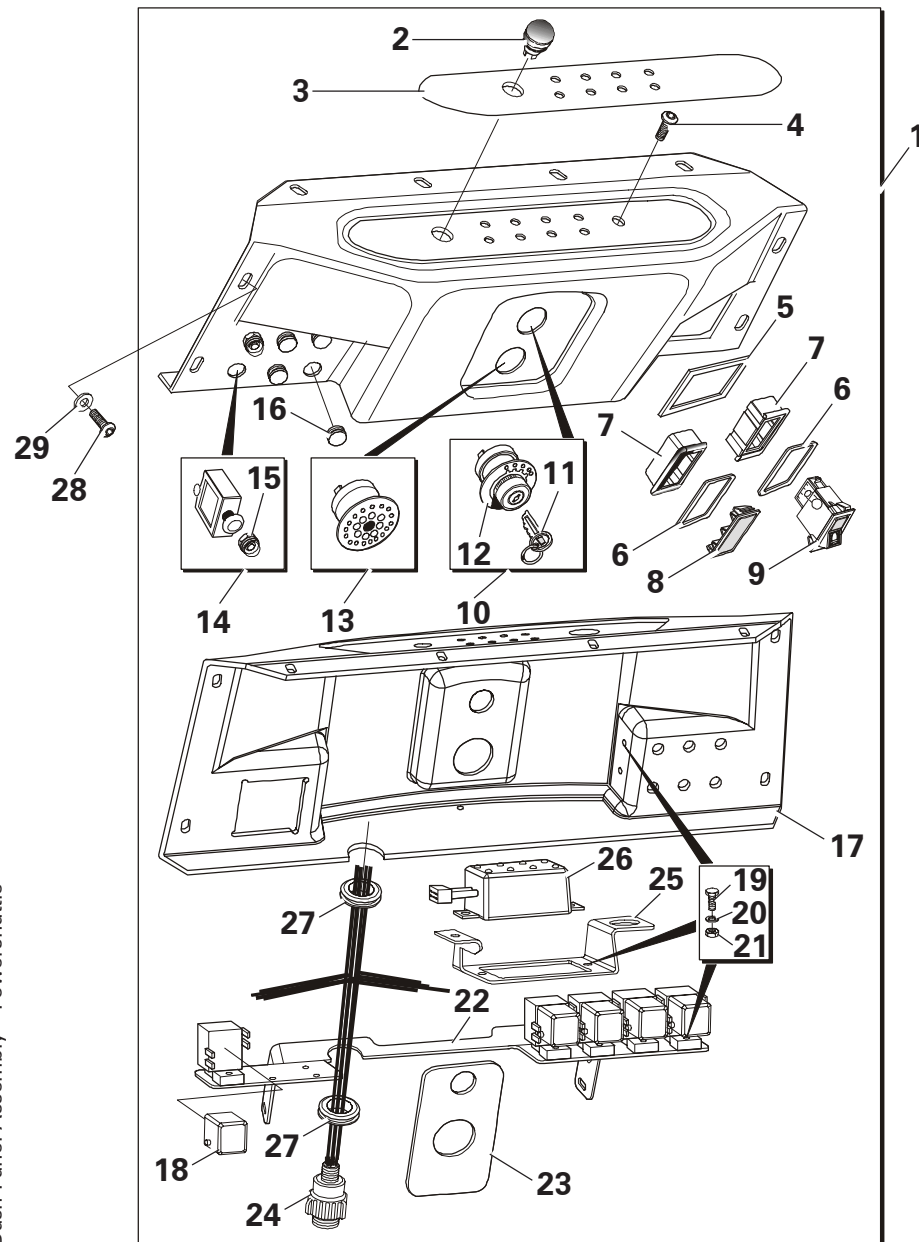
Battery Box Assembly - Powershuttle

ENGINE HARNESS

Item	Part No.	Description	Qty	U/M
1	T15110	HORN - HIGH TONE	1.0	EA
2	T16481	NYLOC NUT	1.0	EA
3	T13911	FLAT WASHER	2.0	EA
4	T16477	BOLT	1.0	EA
5	T51678	SOLENIOD CONNECTOR	A/R	EA
6	T9914	HOSE CLIP	1.0	EA
7	T16668	CAP SCREW	2.0	EA
8	T13362	SPRING WASHER	2.0	EA
9	T11514	PIPE CLIP	2.0	EA
10	T9164	NYLON CLIPS	A/R	EA
11*	T101042	PIPE CLAMP	1.0	EA
12	T13457	NYLOC NUT	1.0	EA
13	T100018	HARNESS ENGINE	1.0	EA
14*	T101059	RETROFIT HOURMETER FIX LOOM	1.0	EA



**DASH PANEL ASSEMBLY**

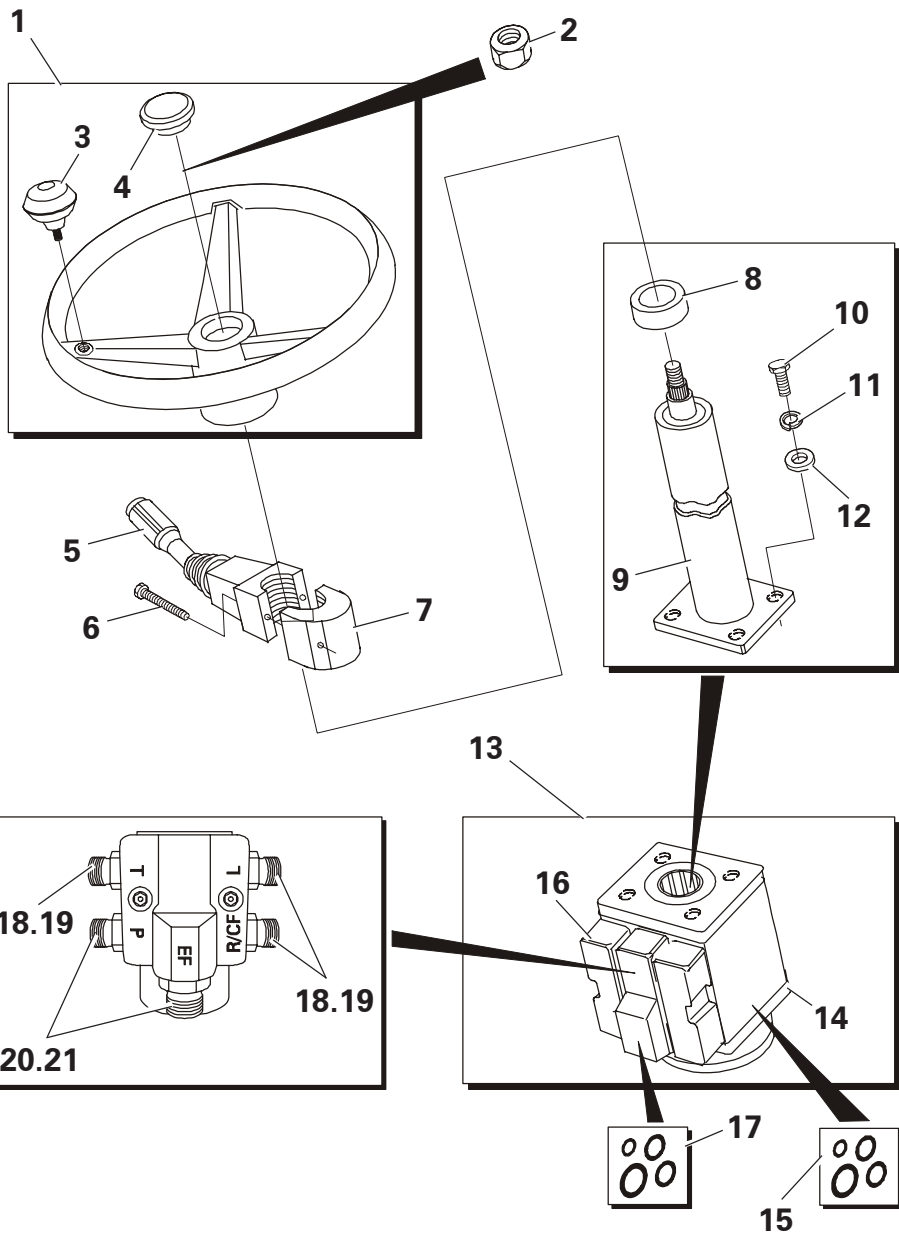


Item	Part No.	Description	Qty	U/M
1	T100082	CONSOLE BOX ASSY	1.0	EA
2	T52302	HORN PUSH	1.0	EA
3	T52308	CONSOLE DECAL	1.0	EA
4	T52449	C/SUNK BOLT	1.0	EA
5	T52448	SWITCH PANEL GASKET	1.0	EA
6	T52304	SWITCH BLANK SEAL	2.0	EA
7	T52446	SWITCH MOUNTING PANEL	2.0	EA
8	T52303	SWITCH BLANK	1.0	EA
9	T52445	BEACON SWITCH	1.0	EA
10	T52307	IGNITION SWITCH	1.0	EA
11	T50479	STARTER SWITCH KEY	1.0	EA
12	T52311	INDEX PLATE	1.0	EA
13	T52309	WARNING BUZZER	1.0	EA
14	T52305	CIRCUIT BREAKER 12AMP	2.0	EA
15	T52306	CIRCUIT BREAKER COVER	2.0	EA
16	T52447	BLANKING GROMMET	4.0	EA
17	T52408	DASH PANEL	1.0	EA
18	T52457	RELAY	5.0	EA
19	T16610	SCREW	13.0	EA
20	T16612	PLAIN WASHER	13.0	EA
21	T16613	NYLOC NUT	13.0	EA
22	T100487	RELAY MOUNTING BRACKET	1.0	EA
23	T100445	SWITCH BACKING PLATE	1.0	EA
24	T52300	PANEL HARNESS (SHUTTLE)	1.0	EA
25	T100446	LED MODULE MTG BRACKET	1.0	EA
26	T52301	LED MODULE	1.0	EA
27	T9538	GROMMET	2.0	EA
28	T100315	SCREW	4.0	EA
29	T13911	FLAT WASHER	4.0	EA

Dash Panel Assembly - Powershuttle

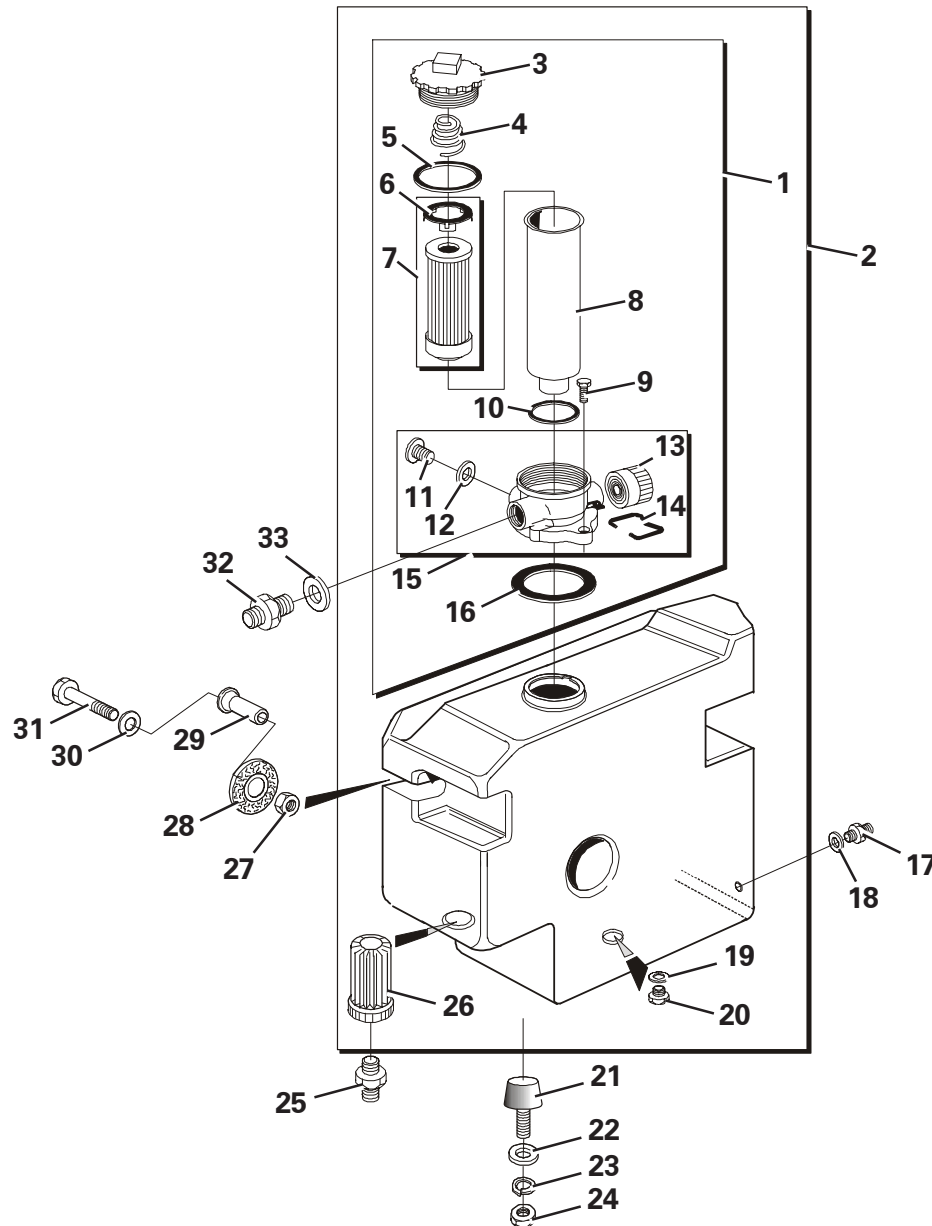
## STEERING ASSEMBLY

Item	Part No.	Description	Qty	U/M
1	T100496	STEERING WHEEL & CAP	1.0	EA
2	T100690	NYLOC NUT	1.0	EA
3	T52520	SPINNER KNOB	1.0	EA
4	T50541	CENTRE CAP	1.0	EA
5	T100019	COLUMN SWITCH P/SHUTTLE	1.0	EA
6	T19583	CAPSCREW	2.0	EA
7	T19611	COLUMN SWITCH CLAMP	1.0	EA
8	T52517	END CAP	1.0	EA
9	T100015	STEERING COLUMN	1.0	EA
10	T7466	SET SCREW	4.0	EA
11	T13362	SPRING WASHER	4.0	EA
12	T15819	PLAIN WASHER	4.0	EA
13	T18782	STEERING/PRIORITY VALVE	1.0	EA
14	T18601	STEERING VALVE	1.0	EA
15	T51661	SEAL KIT	1.0	EA
16	T18602	PRIORITY VALVE	1.0	EA
17	T51662	SEAL KIT	1.0	EA
18	T11165	ADAPTOR	3.0	EA
19	T5637	BONDED SEAL	3.0	EA
20	T100465	ADAPTOR	2.0	EA
21	T5596	HYDRAULIC SEAL	2.0	EA



Steering Assembly

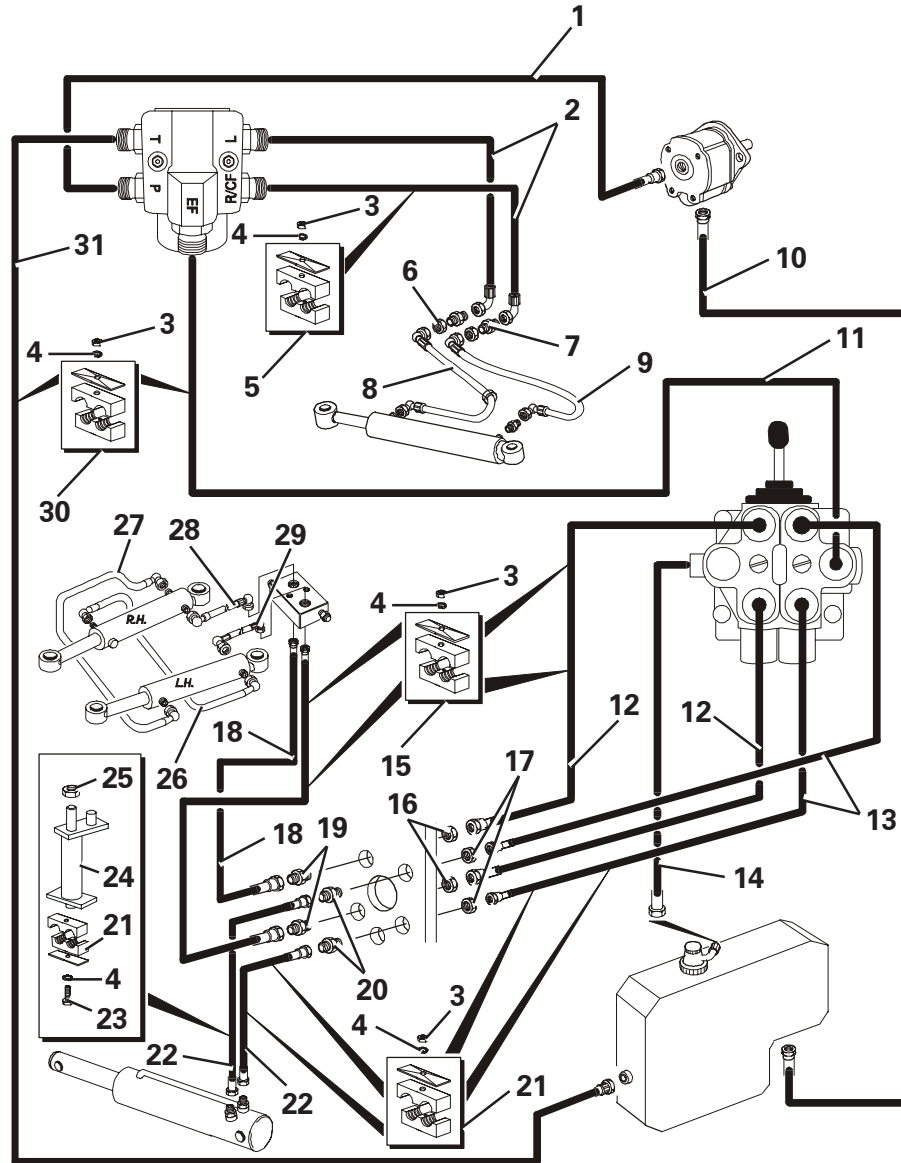
**HYDRAULIC TANK ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T52287	HYD RETURN FILTER	1.0	EA
2	T100012	HYDRAULIC TANK ASSY 70L	1.0	EA
3	T52624	COVER	1.0	EA
4	T52625	SPRING	1.0	EA
5	T52626	SEAL	1.0	EA
6	T52627	FILTER CLIP	1.0	EA
7	T52286	HYDRAULIC ELEMENT	1.0	EA
8	T52628	LOWER CASING	1.0	EA
9	T52545	BOLT	1.0	EA
10	T52629	SEAL	1.0	EA
11	T52630	PLUG	1.0	EA
12	T52631	WASHER	1.0	EA
13	T52632	BREATHER CAP	1.0	EA
14	T52633	CLIP	1.0	EA
15	T52634	HEAD ASSEMBLY	1.0	EA
16	T52635	SEAL	1.0	EA
17	T13936	ADAPTOR	1.0	EA
18	T5596	HYDRAULIC SEAL	1.0	EA
19	T52588	FIBRE WASHER	1.0	EA
20	T52288	DRAIN PLUG	1.0	EA
21	T100214	RUBBER BUFFER (NBR)	2.0	EA
22	T9345	WASHER PLATED	2.0	EA
23	T12972	SPRING WASHER	2.0	EA
24	T9775	NUT PLATED	2.0	EA
25	T19788	ADAPTOR	1.0	EA
26	T52694	SUCTION ELEMENT	1.0	EA
27	T13064	NUT	2.0	EA
28	T100323	RUBBER BACKED WASHER	2.0	EA
29	T100372	TANK SPACER	2.0	EA
30	T10734	H/DUTY WASHER PLATED	2.0	EA
31	T52092	BOLT HEX.HEAD	2.0	EA
32	T8014	EQUAL MALE ADAPTOR	1.0	EA
33	T5594	SEAL	1.0	EA

Hydraulic Tank Assembly

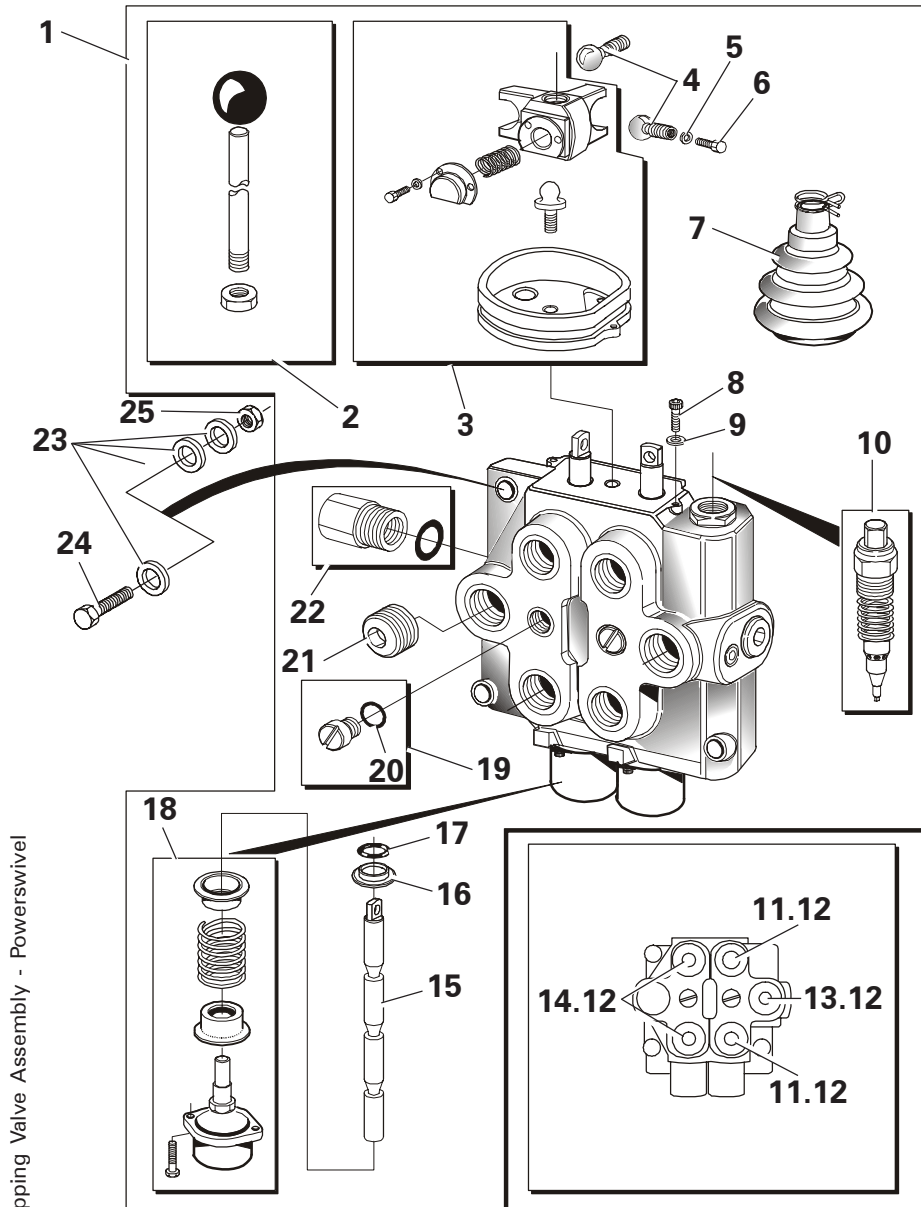
## HYDRAULIC CIRCUIT



Item	Part No.	Description	Qty	U/M
1	T100176	HOSE	1.0	EA
2	T100178	HOSE	2.0	EA
3	T13457	NYLOC NUT	10.0	EA
4	T12972	SPRING WASHER	11.0	EA
5	T20412	PIPE CLAMP	1.0	EA
6	T52553	LOCKNUT	2.0	EA
7	T13523	ADAPTOR	2.0	EA
8	T100184	HOSE	1.0	EA
9	T100183	HOSE	1.0	EA
10	T100175	SUCTION HOSE	1.0	EA
11	T100179	HOSE	1.0	EA
12	T100182	HOSE	2.0	EA
13	T100181	HOSE	2.0	EA
14	T100180	HOSE	1.0	EA
15	T19060	PIPE CLAMP	4.0	EA
16	T52551	LOCKNUT	2.0	EA
17	T52552	LOCKNUT	2.0	EA
18	T100186	HOSE	2.0	EA
19	T12483	ADAPTOR	2.0	EA
20	T100392	ADAPTOR	2.0	EA
21	T100564	PIPE CLAMP	5.0	EA
22	T100185	HOSE	2.0	EA
23	T14277	BOLT	1.0	EA
24	T100385	HOSE SUPPORT	1.0	EA
25	T16422	NYLOC NUT	1.0	EA
26	T100189	HOSE	1.0	EA
27	T100190	HOSE	1.0	EA
28	T100188	HOSE	1.0	EA
29	T100187	HOSE	1.0	EA
30	T19115	PIPE CLAMP	2.0	EA
31	T100177	HOSE	1.0	EA

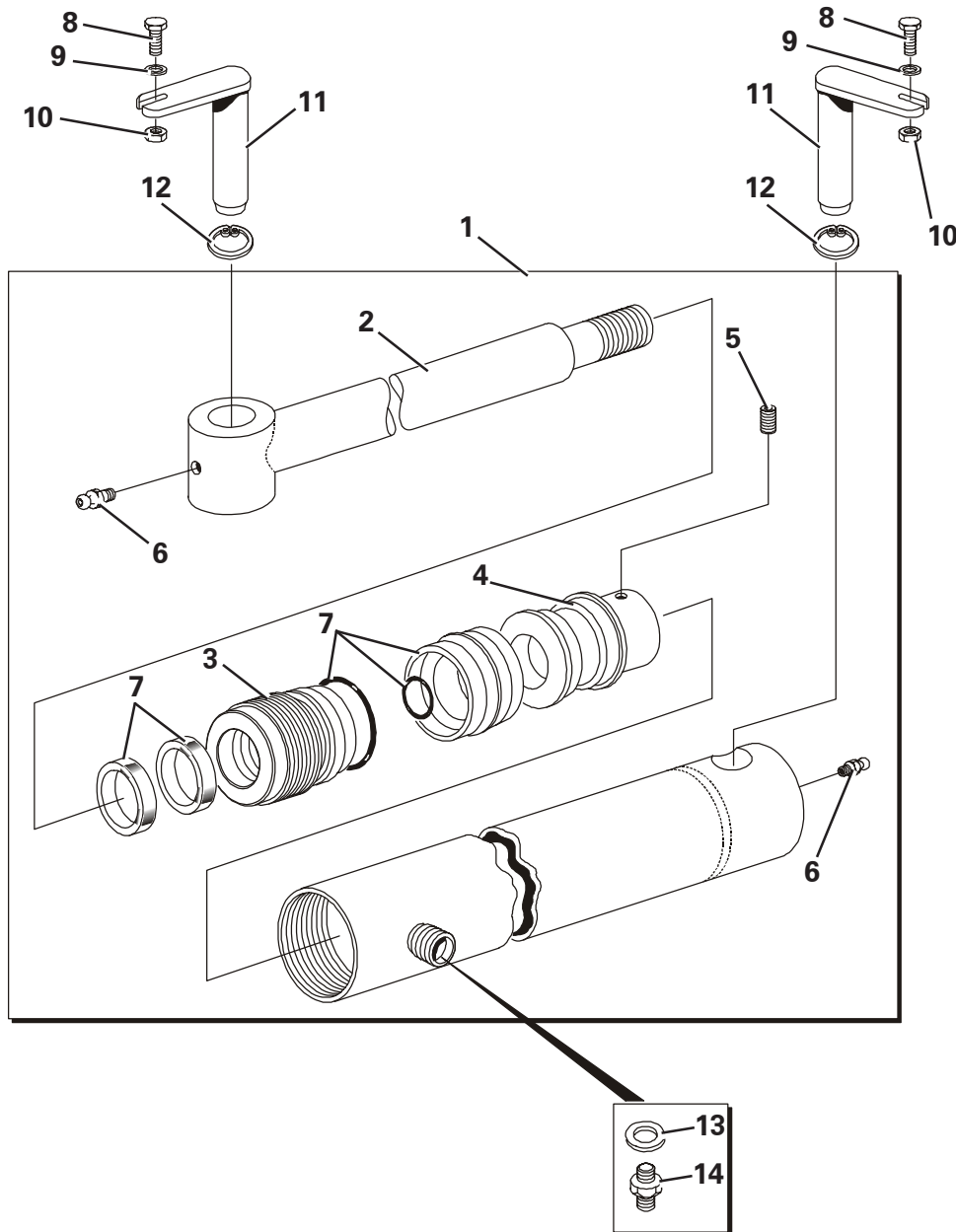
**TIPPING VALVE ASSEMBLY**

Item	Part No.	Description	Qty	U/M
1	T100030	TIPPING VALVE ASSY	1.0	EA
2	T52667	LEVER ASSEMBLY	1.0	EA
3	T52666	LEVER BASE ASSEMBLY	1.0	EA
4	T52669	SWIVEL PINS	2.0	EA
5	T52670	SPRING WASHER	2.0	EA
6	T52671	SCREW	2.0	EA
7	T52668	RUBBER GAITER	1.0	EA
8	T52672	SCREW	2.0	EA
9	T52673	SPACER	2.0	EA
10	T52674	VALVE	1.0	EA
11	T52683	ADAPTOR	2.0	EA
12	T5596	HYDRAULIC SEAL	5.0	EA
13	T100465	ADAPTOR	1.0	EA
14	T52550	ADAPTOR	1.0	EA
15	T52675	SPOOL	2.0	EA
16	T52676	FLANGED WASHER	2.0	EA
17	T52677	SEAL	2.0	EA
18	T52678	CAP ASSEMBLY	2.0	EA
19	T52680	CHECK VALVE ASSEMBLY	2.0	EA
20	T52681	SEAL	2.0	EA
21	T52682	PLUG	1.0	EA
22	T52679	ADAPTOR	1.0	EA
23	T15819	PLAIN WASHER	12.0	EA
24	T16501	BOLT	3.0	EA
25	T13064	NUT	3.0	EA



Tipping Valve Assembly - Powerswivel

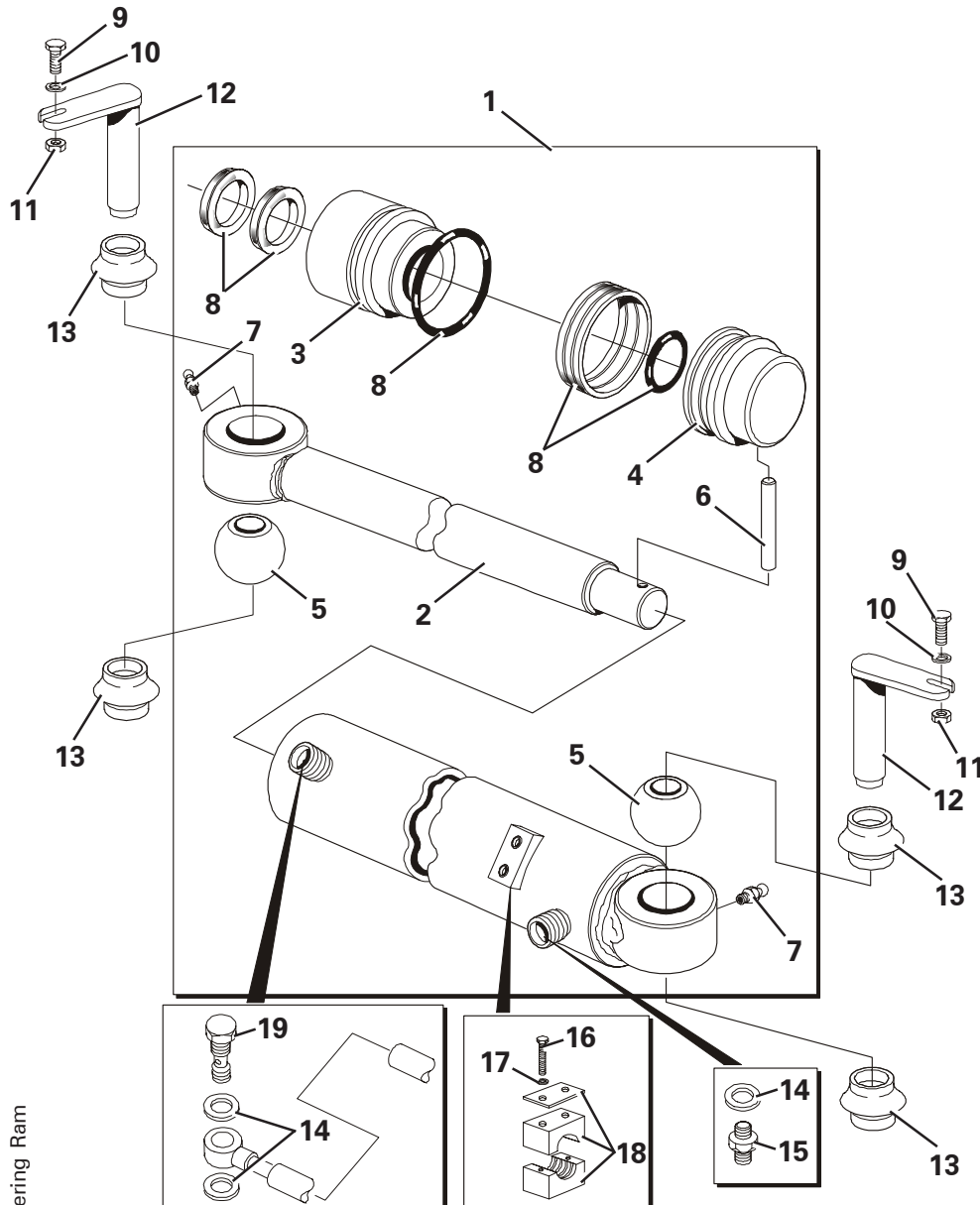
**TIPPING RAM ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T100031	TIPPING RAM	1.0	EA
2	T52541	ROD	1.0	EA
3	T50497	HEAD BUSH	1.0	EA
4	T50495	PISTON	1.0	EA
5	T52542	GRUBSCREW	1.0	EA
6	T13454	STRAIGHT GREASE NIPPLE	2.0	EA
7	T50496	SEAL KIT	1.0	EA
8	T16505	SET BOLT	2.0	EA
9	T15819	PLAIN WASHER	2.0	EA
10	T13064	NUT	2.0	EA
11	T100089	TIPPING RAM PIN	2.0	EA
12	T100098	CIRCLIP	2.0	EA
13	T5637	BONDED SEAL	2.0	EA
14	T13606	ADAPTOR	2.0	EA

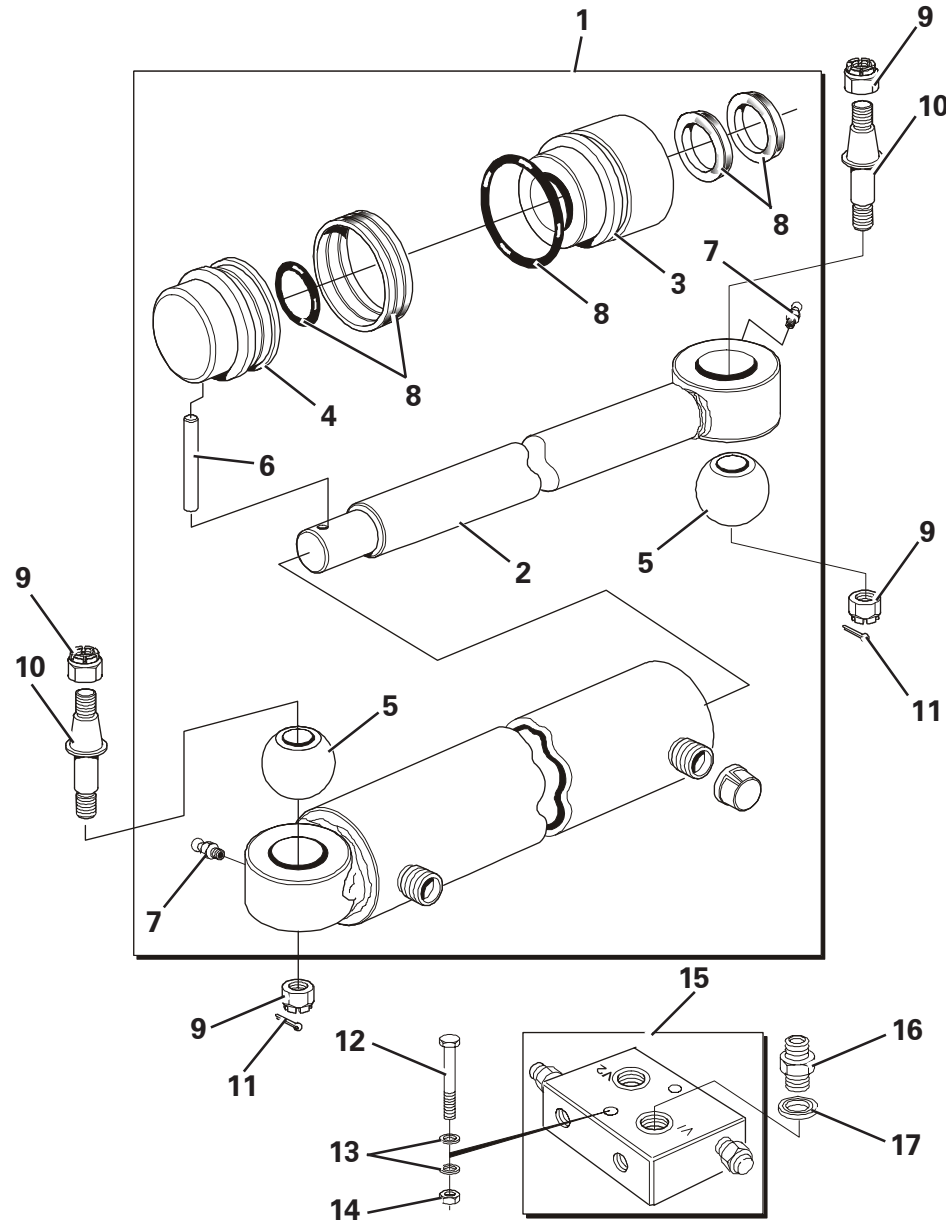
**STEERING RAM ASSEMBLY**

Item	Part No.	Description	Qty	U/M
1	T100457	STEER RAM	1.0	EA
2	T52538	ROD	1.0	EA
3	T52539	HEADBUSH	1.0	EA
4	T51746	PISTON	1.0	EA
5	T2162	SPHERICAL BEARING	2.0	EA
6	T50487	TENSION PIN	1.0	EA
7	T13454	STRAIGHT GREASE NIPPLE	2.0	EA
8	T52540	SEAL KIT	1.0	EA
9	T16505	SET BOLT	2.0	EA
10	T15819	PLAIN WASHER	2.0	EA
11	T12762	LOCKING NUT	2.0	EA
12	T100361	PIVOT PIN	2.0	EA
13	T10160	RUBBER DUST SEAL	4.0	EA
14	T5596	HYDRAULIC SEAL	3.0	EA
15	T13936	ADAPTOR	1.0	EA
16	T17155	BOLT	2.0	EA
17	T 10418	SHAKEPROOF WASHER	2.0	EA
18	T100553	PIPE CLAMP	1.0	EA
19	T52641	BANJO BOLT	1.0	EA



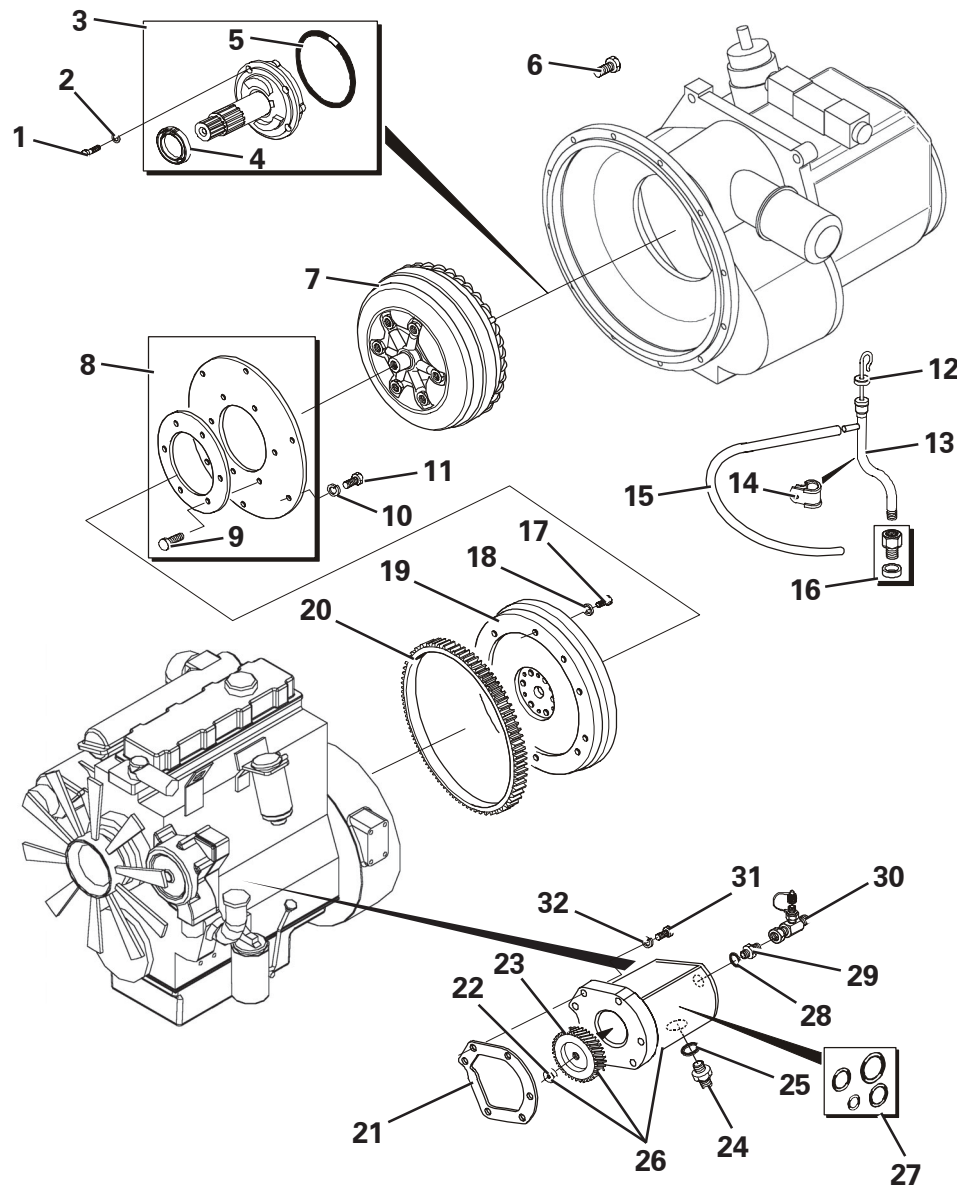
Steering Ram

**SLEW RAM ASSEMBLY**



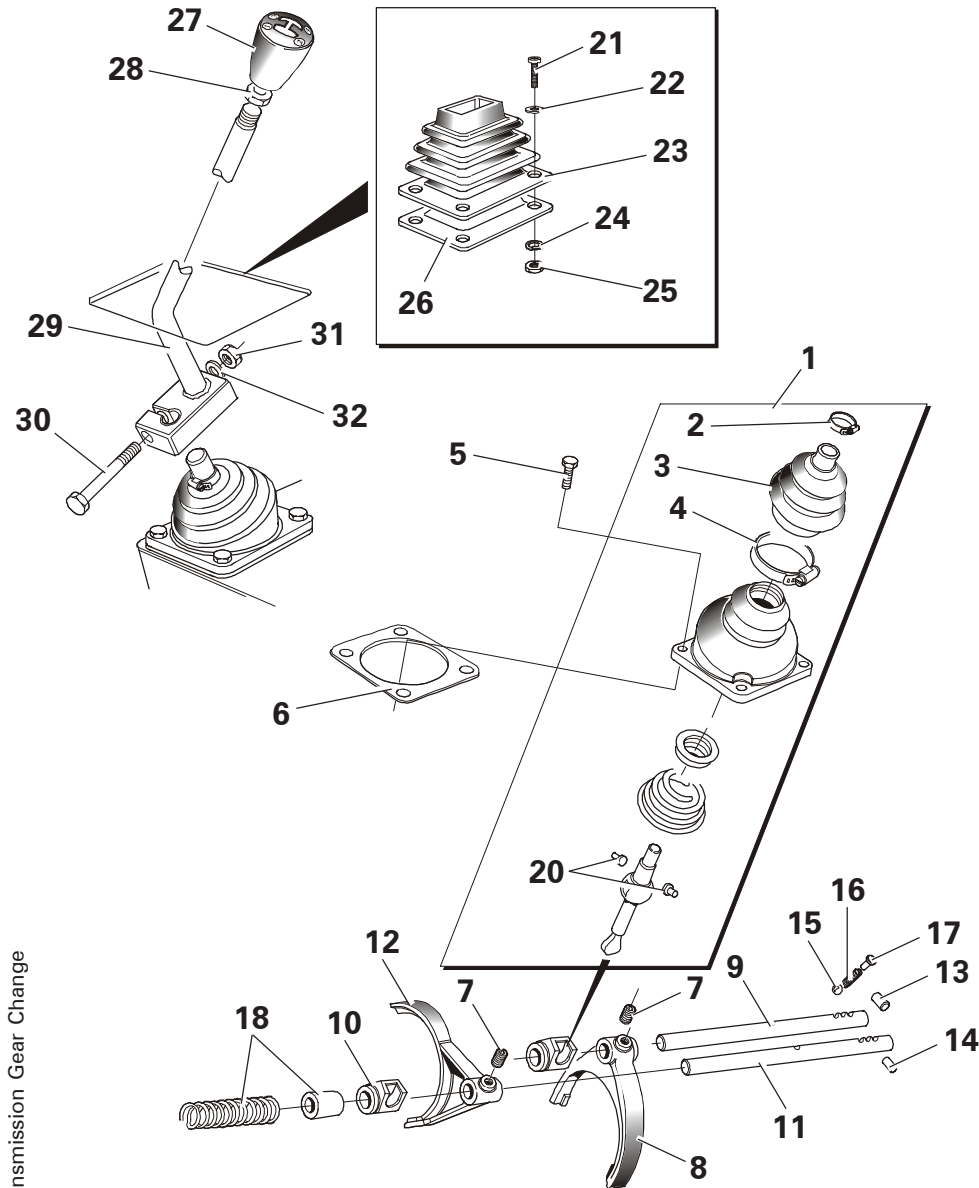
Item	Part No.	Description	Qty	U/M
1	T100482	SLEW RAM	2.0	EA
2	T52537	ROD	1.0	EA
3	T50492	HEAD BUSH	1.0	EA
4	T50491	PISTON	1.0	EA
5	T50489	BEARING	2.0	EA
6	T50487	TENSION PIN	1.0	EA
7	T13454	STRAIGHT GREASE NIPPLE	2.0	EA
8	T50490	SEAL KIT	1.0	EA
9	T100490	SLOTTED NUT	8.0	EA
10	T100483	RAM PIN	4.0	EA
11	T6751	SPLIT PIN	8.0	EA
12	T6778	BOLT	2.0	EA
13	T6762	FLAT WASHER	4.0	EA
14	T6840	NYLOC NUT	2.0	EA
15	T17882	DUEL CROSS LINE RELIEF VALVE	1.0	EA
16	T12118	ADAPTOR	4.0	EA
17	T5637	BONDED SEAL	4.0	EA

## TRANSMISSION DRIVE & HYD. PUMP



Item	Part No.	Description	Qty	U/M
1	T1960	BOLT	4.0	EA
2	T1959	SEALING WASHER	4.0	EA
3	T2586	OIL PUMP	1.0	EA
4	T52232	OIL SEAL	1.0	EA
5	T2584	RING-SEAL	1.0	EA
6	T16505	SET BOLT	12.0	EA
7	T2632	TORQUE CONVERTER	1.0	EA
8	T2631	DRIVE PLATE KIT	1.0	EA
9	T50523	SET SCREW	6.0	EA
10	T50524	WASHER	6.0	EA
11	T50352	BOLT	6.0	EA
12	T13333	GEARBOX DIPSTICK	1.0	EA
13	T100412	GEARBOX FILLER TUBE	1.0	EA
14	T9914	HOSE CLIP	1.0	EA
15	T52572	LEAK OFF PIPE	1.0	EA
16	T2619	NUT C/W SEAL	1.0	EA
17	T52639	BOLT	6.0	EA
18	T52638	WASHER	6.0	EA
19	T52637	FLYWHEEL	1.0	EA
20	T52636	STARTER RING	1.0	EA
21	T52567	GASKET	1.0	EA
22	T52645	NUT	1.0	EA
23	T52644	HELICAL GEAR	1.0	EA
24	T12240	INLET ADAPTOR	1.0	EA
25	T 9606	O RING	1.0	EA
26	T100003	GEAR PUMP	1.0	EA
27	T52643	SEAL KIT	1.0	EA
28	T6935	O RING	1.0	EA
29	T100464	ADAPTOR	1.0	EA
30	T100516	HYDRAULIC TEST POINT	1.0	EA
31	T14277	BOLT	5.0	EA
32	T12972	SPRING WASHER	5.0	EA

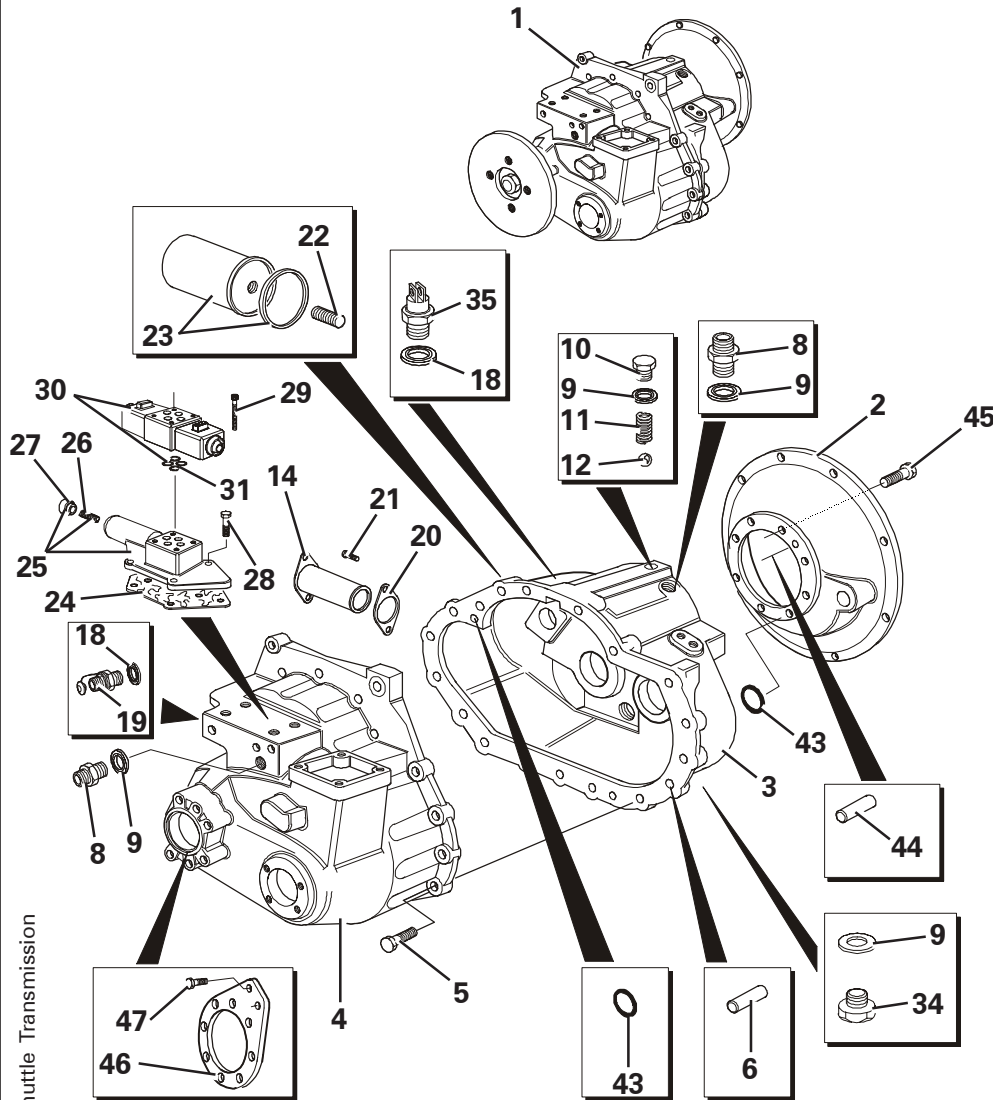
**TRANSMISSION - GEAR CHANGE**



Transmission Gear Change

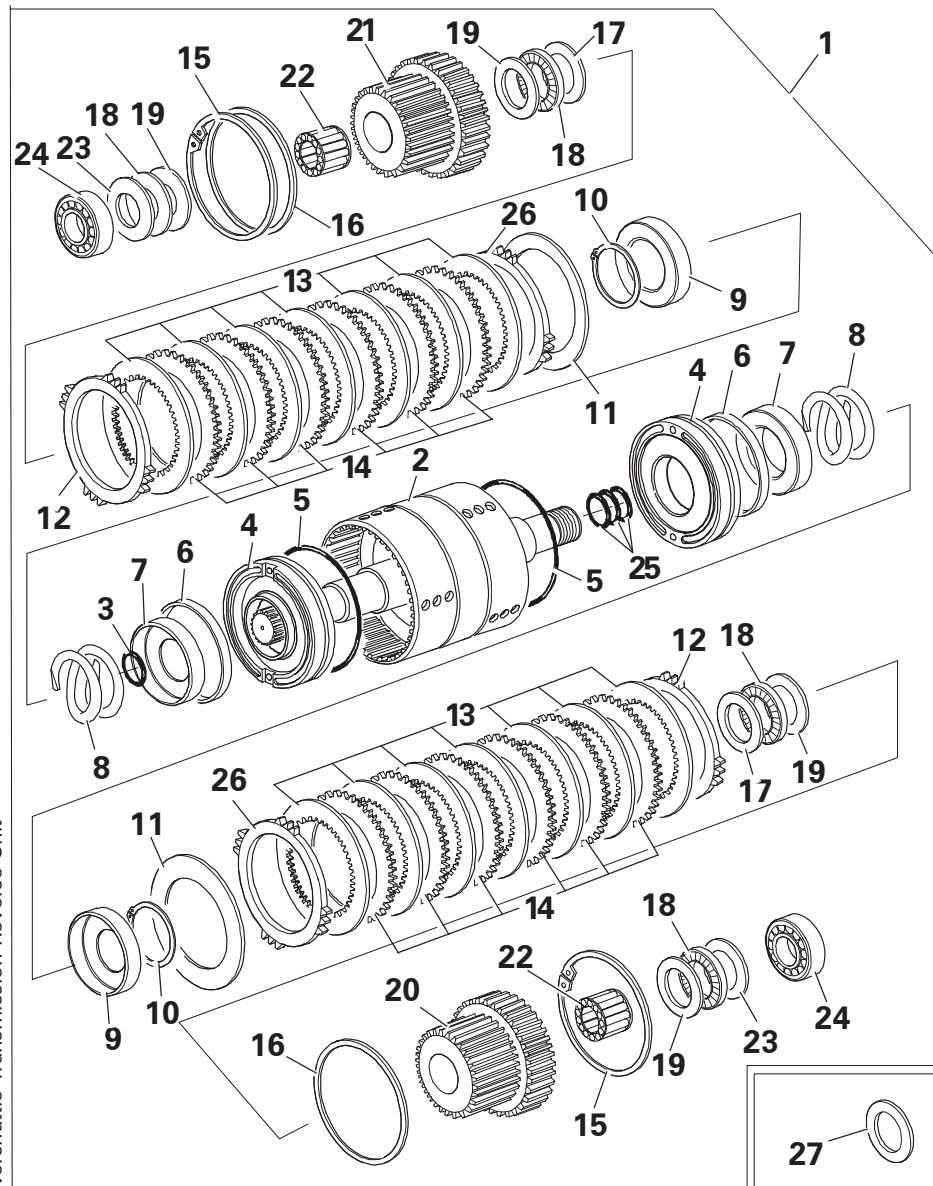
Item	Part No.	Description	Qty	U/M
1	T2534	GEAR LEVER ASSEMBLY	1.0	EA
2	T2533	CLIP	1.0	EA
3	T2532	GAITER	1.0	EA
4	T2531	CLIP	1.0	EA
5	T50330	BOLT	4.0	EA
6	T50324	GASKET	1.0	EA
7	T50506	SCREW	4.0	EA
8	T50325	SELECTOR FORK	1.0	EA
9	T51878	SELECTOR SHAFT	1.0	EA
10	T50327	SELECTOR BLOCK	2.0	EA
11	T51878	SELECTOR SHAFT	1.0	EA
12	T50328	SELECTOR FORK	1.0	EA
13	T2522	ROLLER	1.0	EA
14	T50329	PLUG	1.0	EA
15	T2520	BALL	2.0	EA
16	T50388	DETENT SPRING	2.0	EA
17	T50505	DENTENT PLUG	2.0	EA
18	T52199	SPRING	1.0	EA
20	T50252	RETAINING PIN	2.0	EA
21	T16477	BOLT	4.0	EA
22	T13911	FLAT WASHER	4.0	EA
23	T100288	GEAR LEVER GAITER	1.0	EA
24	T14837	SPRING WASHER	4.0	EA
25	T16481	NYLOC NUT	4.0	EA
26	T100456	GAITER RETAINING PLATE	1.0	EA
27	T3694	BLACK MOULDED KNOB	1.0	EA
28	T12509	NUT	1.0	EA
29	T100219	GEAR CHANGE LEVER	1.0	EA
30	T6723	BOLT	1.0	EA
31	T6725	NUT	1.0	EA
32	T6724	SPRING WASHER	1.0	EA

## TRANSMISSION - EXTERNAL



Item	Part No.	Description	Qty	U/M
1	T52478	GEARBOX	1.0	EA
2	T52642	FLYWHEEL HOUSING	1.0	EA
3	T52088	FRONT CASING	1.0	EA
4	T52405	CASE	1.0	EA
5	T51691	SET SCREW	18.0	EA
6	T50339	DOWEL	2.0	EA
8	T1928	ADAPTOR	2.0	EA
9	T2613	SEAL	5.0	EA
10	T2612	PLUG	1.0	EA
11	T2611	SPRING	1.0	EA
12	T2610	BALL	2.0	EA
14	T2608	SUCTION STRAINER	1.0	EA
18	T2604	SEAL	2.0	EA
19	T50511	PRESSURE POINT	1.0	EA
20	T2602	GASKET	1.0	EA
21	T50344	BOLT	2.0	EA
22	T51630	FILTER ADAPTOR	1.0	EA
23	T52450	TRANSMISSION OIL FILTER	1.0	EA
24	T2599	GASKET	1.0	EA
25	T2598	ADAPTOR BLOCK ASSEMBLY	1.0	EA
26	T51607	SPRING	1.0	EA
27	T51606	PLUG	1.0	EA
28	T50345	BOLT	4.0	EA
29	T50570	CAP SCREW	4.0	EA
30	T50512	SOLENOID VALVE	1.0	EA
31	T51877	SEAL KIT	1.0	EA
34	T2612	PLUG	1.0	EA
35	T50349	OIL PRESSURE SWITCH	1.0	EA
43	T1931	'O' RING	2.0	EA
44	T2615	DOWEL	2.0	EA
45	T50593	SCREW	12.0	EA
46	T52406	BRACKET	1.0	EA
47	T2256	BOLT	7.0	EA

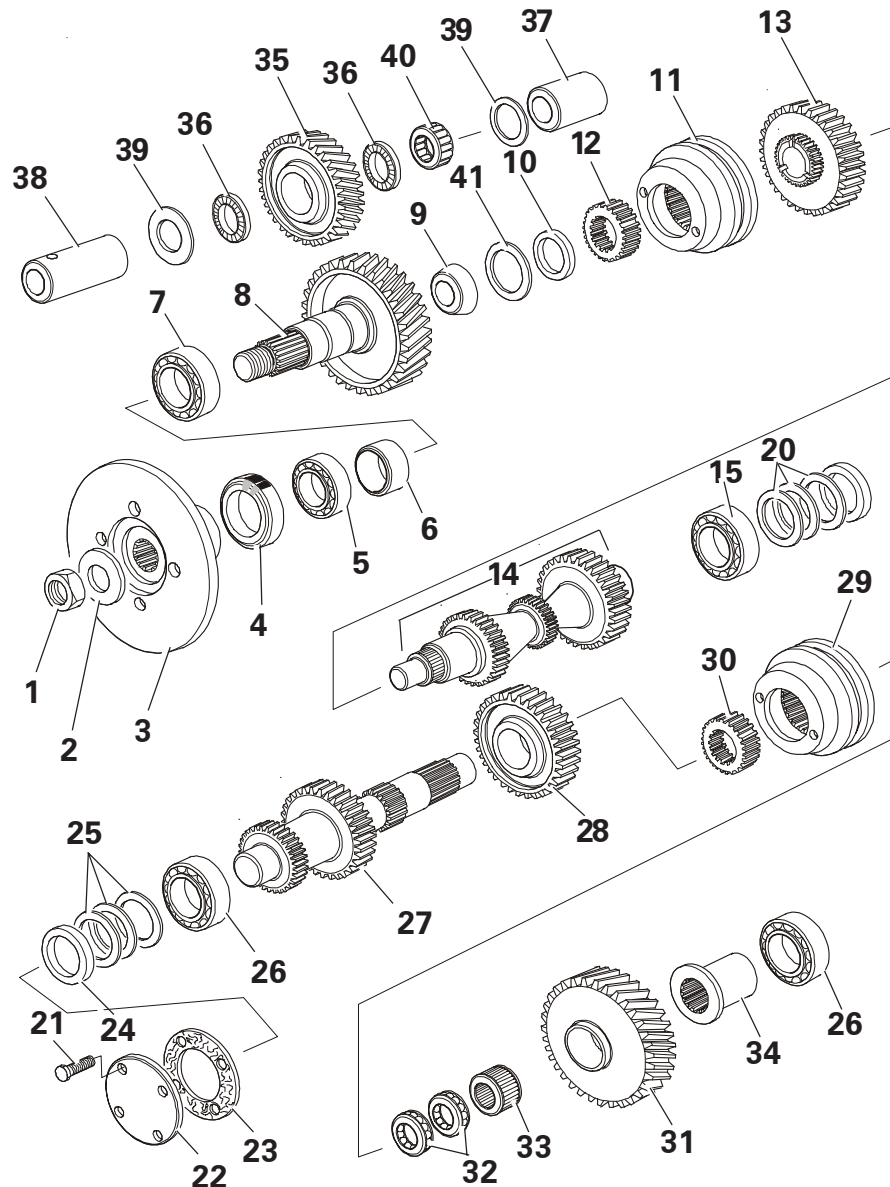
## TRANSMISSION - REVERSE UNIT



Item	Part No.	Description	Qty	U/M
1	T51592	REVERSER ASSY	1.0	EA
2	T51954	CLUTCH HOUSING	1.0	EA
3	T1725	'O' RING	2.0	EA
4	T51950	PISTON	2.0	EA
5	T2498	O RING	2.0	EA
6	T50316	LINER	2.0	EA
7	T1722	OIL BAFFLE	2.0	EA
8	T1711	SPRING	2.0	EA
9	T1723	SPRING RETAINER	2.0	EA
10	T1710	CIRCLIP	2.0	EA
11	T51951	DISC SPRING	2.0	EA
12	T50318	PRESSURE PLATE	2.0	EA
13	T2503	FRICITION PLATE	12.0	EA
14	T1720	COUNTER PLATE	10.0	EA
15	T1709	CIRCLIP	2.0	EA
16	T50317	SHIM	A/R	EA
17	T52152	THRUST WASHER	2.0	EA
18	Not fitted			
19	T2512	THRUST WASHER	4.0	EA
20	T1715	GEAR & PLATE ASSY	1.0	EA
21	T1716	GEAR & PLATE ASSY	1.0	EA
22	T2510	BEARING	2.0	EA
23	T2514	THRUST WASHER	2.0	EA
24	T51683	TAPER ROLLER BEARING	2.0	EA
25	T2516	SEAL RING	4.0	EA
26	T52252	PRESSURE PLATE	2.0	EA
27	T51685	SHIM KIT	1.0	EA

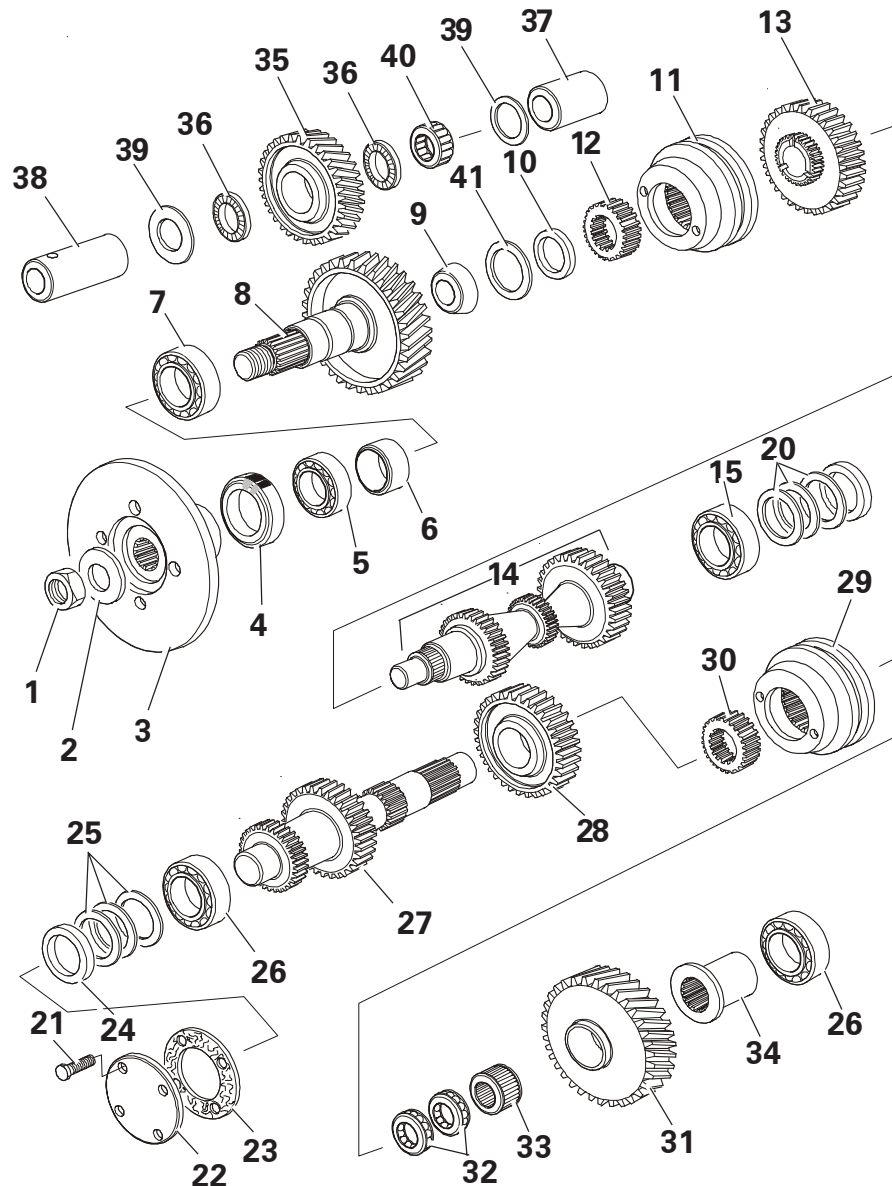
Powershuttle Transmission Reverse Unit

## TRANSMISSION - INTERNAL



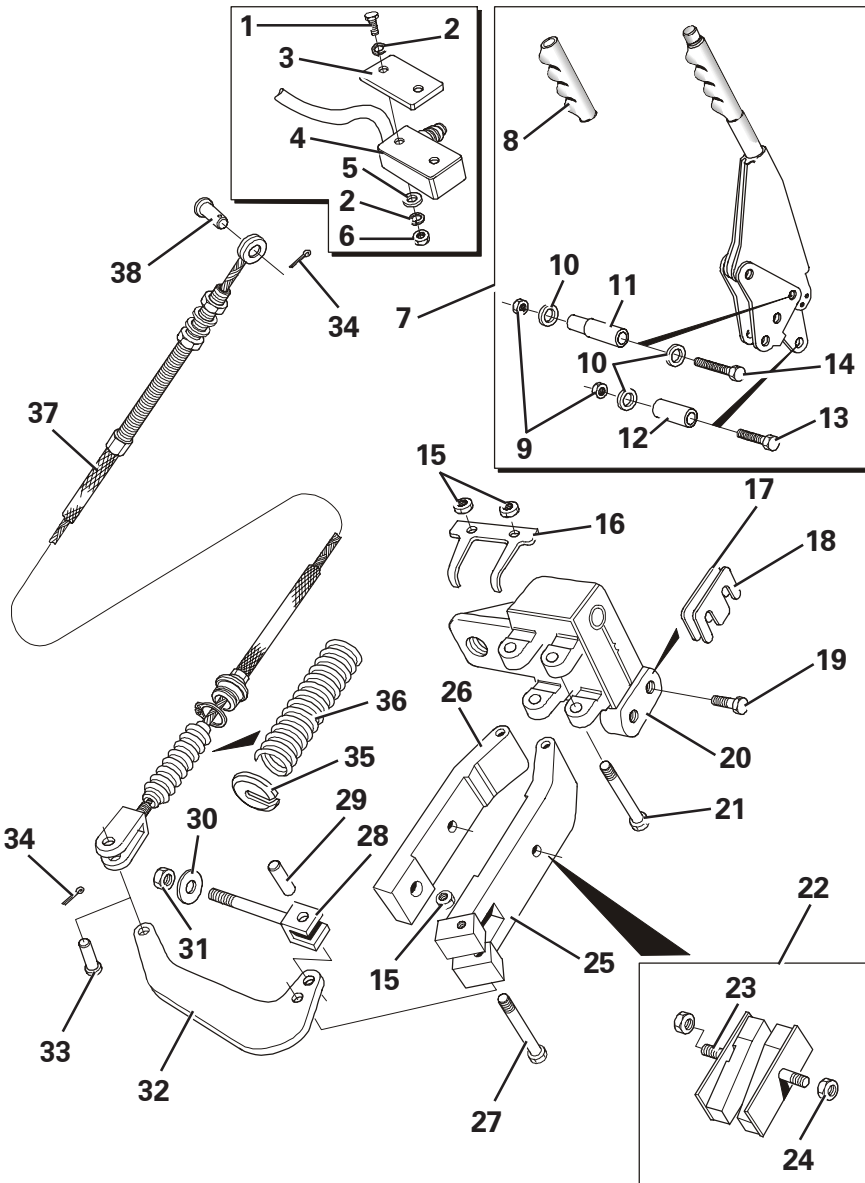
Item	Part No.	Description	Qty	U/M
1	T50662	STAKE NUT	1.0	EA
2	T2581	WASHER	1.0	EA
3	T50663	DISC FLANGE	1.0	EA
4	T2579	OIL SEAL	1.0	EA
5	T50515	BEARING	1.0	EA
6	T51577	SPACER KIT	1.0	EA
7	T50393	BEARING	1.0	EA
8	T2575	GEAR	1.0	EA
9	T50516	PILOT BEARING	1.0	EA
10	T51692	SPACER	1.0	EA
11	T2572	SYNCHRONISER ASSEMBLY	1.0	EA
12	T2571	SLEEVE	1.0	EA
13	T2570	GEAR	1.0	EA
14	T2569	MAINSHAFT	1.0	EA
15	T2568	BEARING	1.0	EA
20	T1705	SHIM KIT	1.0	EA
21	T50517	BOLT	4.0	EA
22	T52202	END COVER	1.0	EA
23	T51947	GASKET	1.0	EA

## TRANSMISSION - INTERNAL



Item	Part No.	Description	Qty	U/M
24	T51689	SPACER	1.0	EA
25	T51690	SHIM KIT	1.0	EA
26	T51688	TAPER ROLLER BEARING	2.0	EA
27	T2548	LAYSHAFT	1.0	EA
28	T2547	GEAR	1.0	EA
29	T2572	SYNCHRONISER ASSEMBLY	1.0	EA
30	T2545	SLEEVE	1.0	EA
31	T2544	GEAR	1.0	EA
32	T2543	BEARING	2.0	EA
33	T2542	BEARING	1.0	EA
34	T2541	SPACER	1.0	EA
35	T50332	IDLER GEAR	1.0	EA
36	T50333	BEARING	2.0	EA
37	T50334	SPACER	1.0	EA
38	T50392	IDLER SHAFT	1.0	EA
39	T50335	WASHER	4.0	EA
40	T2535	BEARING	1.0	EA
41	T1935	SPACER	1.0	EA

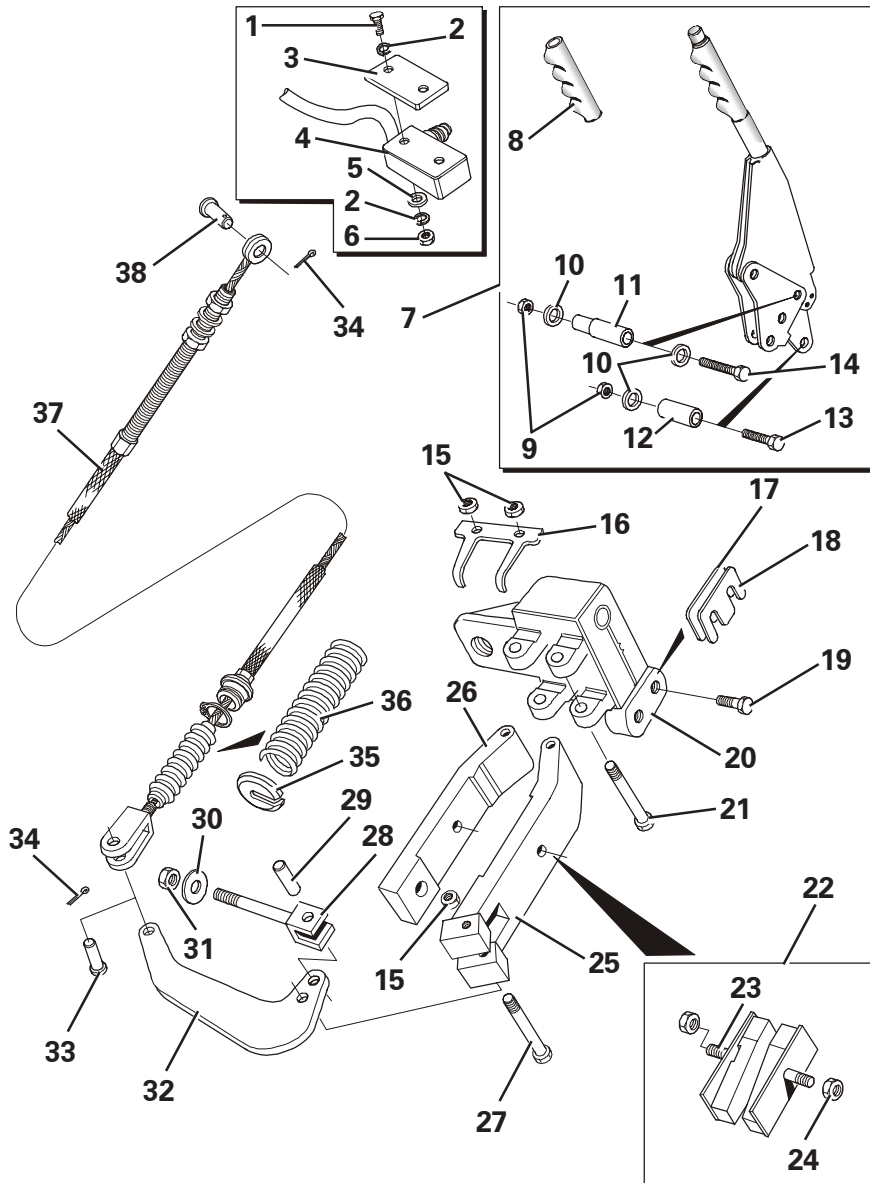
**HANDBRAKE ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T13321	SET SCREW	2.0	EA
2	T11439	SPRING WASHER	4.0	EA
3	T13289	BACKING PLATE	1.0	EA
4	T100223	MICRO SWITCH	1.0	EA
5	T11440	WASHER	2.0	EA
6	T11447	NUT	2.0	EA
7	T100236	HANDBRAKE LEVER	1.0	EA
8	T52661	GRIP	1.0	EA
9	T13457	NYLOC NUT	2.0	EA
10	T9345	WASHER	3.0	EA
11	T52663	SHOULDERED SPACER	1.0	EA
12	T52662	SPACER	1.0	EA
13	T17157	BOLT	1.0	EA
14	T2468	BOLT	1.0	EA
15	T2466	PHILIDAS NUT	3.0	EA
16	T2471	RELEASE SPRING	1.0	EA
17	T1597	SHIM (0.5MM)	A/R	EA
18	T1596	SHIM (1.5MM)	A/R	EA
19	T1602	BOLT	2.0	EA
20	T51401	BODY	1.0	EA

Handbrake Assembly - 5-7 Tonne

## HANDBRAKE ASSEMBLY

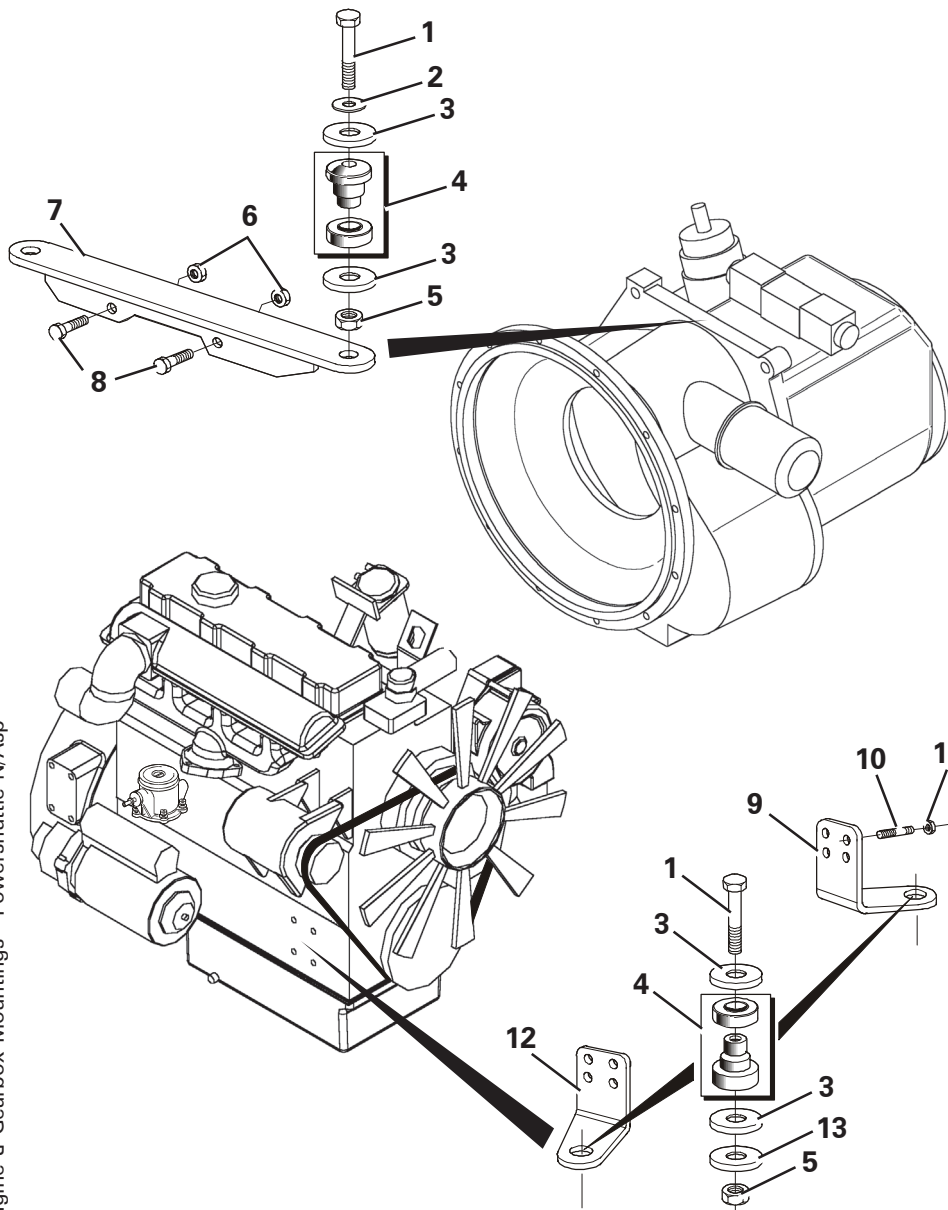


Item	Part No.	Description	Qty	U/M
21	T51400	BOLT	2.0	EA
22	T1600	DISC PAD KIT	1.0	EA
23	T51398	BOLT	2.0	EA
24	T2457	PHILIDAS NUT	2.0	EA
25	T51403	ARM ADJUSTING	1.0	EA
26	T51399	ARM ADJUSTING	1.0	EA
27	T2232	ANCHOR BOLT	1.0	EA
28	T50295	PULL ROD	1.0	EA
29	T51402	PIN PIVOT	1.0	EA
30	T50296	WASHER	1.0	EA
31	T50297	NUT	1.0	EA
32	T51397	LEVER	1.0	EA
33	T7499	CLEVIS PIN	1.0	EA
34	T6702	SPLIT PIN	2.0	EA
35	T100471	SPRING RETAINER	1.0	EA
36	T100472	CABLE RETURN SPRING	1.0	EA
37	T100270	HANDBRAKE CABLE	1.0	EA
38	T7044	CLEVIS PIN	1.0	EA

Handbrake Assembly - 5-7 Tonne

**ENGINE & GEARBOX MOUNTINGS**

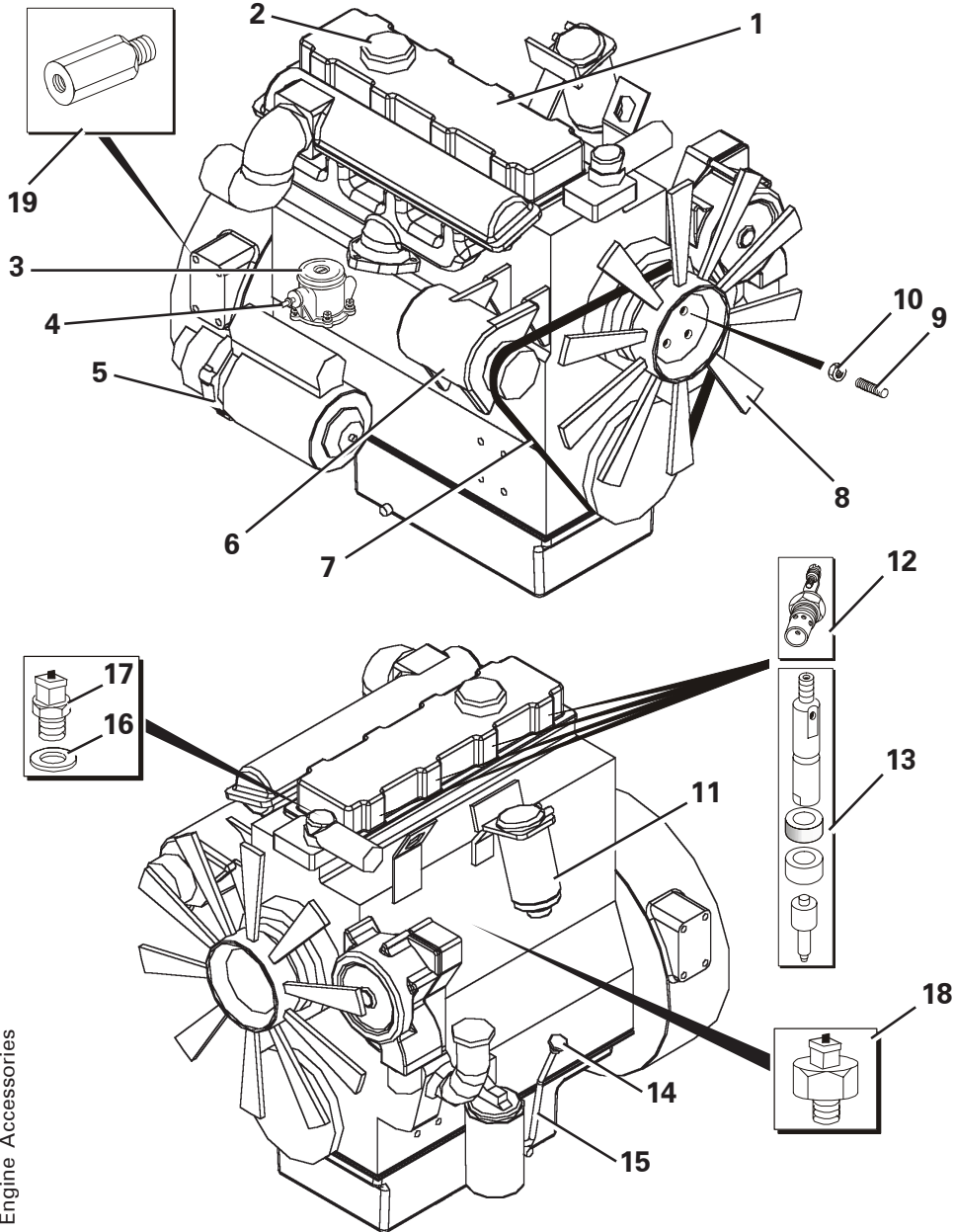
Item	Part No.	Description	Qty	U/M
1	T20615	BOLT	4.0	EA
2	T7647	WASHER	4.0	EA
3	T100303	PAD SPACER	8.0	EA
4	T100002	ENGINE MOUNTING	4.0	EA
5	T14910	NUT	4.0	EA
6	T13437	PHILIDAS NUT	2.0	EA
7	T100114	GEARBOX MOUNTING	1.0	EA
8	T9072	BOLT	2.0	EA
9	T100058	ENGINE MOUNTING R/H	1.0	EA
10	T52565	STUD	8.0	EA
11	T52566	NUT	8.0	EA
12	T100060	ENGINE MOUNTING L/H	1.0	EA
13	T100815	HEAVY DUTY WASHER	2.0	EA



Engine & Gearbox Mountings - Powershuttle N/Asp

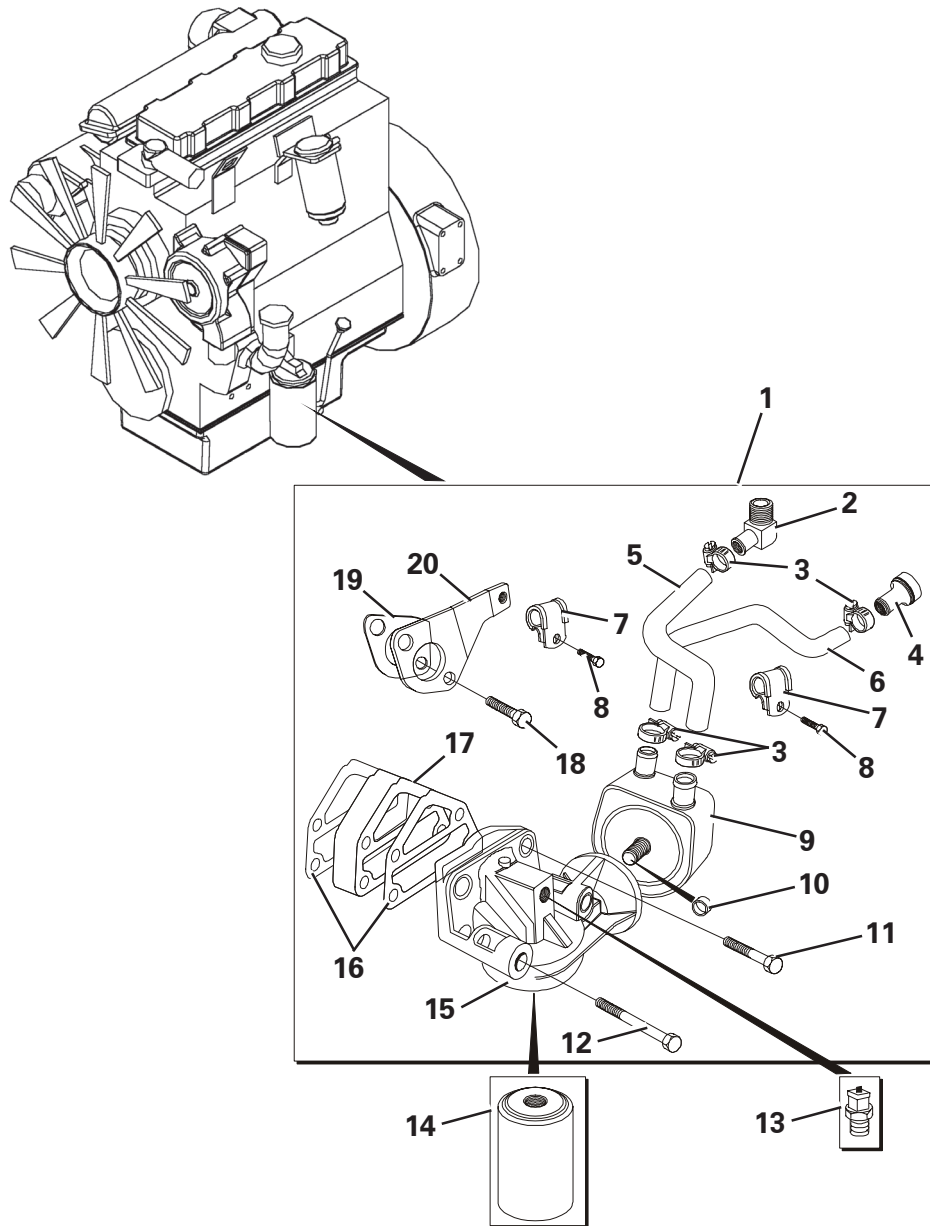
**ENGINE - ACCESSORIES**

Item	Part No.	Description	Qty	U/M
1	T100000	ENGINE	1.0	EA
2	T52575	OIL FILLER CAP	1.0	EA
3	T52573	FUEL LIFT PUMP	1.0	EA
4	T13735	FUEL PUMP CONNECTOR	1.0	EA
5	T52560	STARTER MOTOR	1.0	EA
6	T52561	ALTERNATOR	1.0	EA
7	T52562	BELT	1.0	EA
8	T52563	FAN	1.0	EA
9	T52568	STUD	4.0	EA
10	T52569	NUT	4.0	EA
11	T52241	FUEL FILTER	1.0	EA
12	T52574	GLOW PLUG	4.0	EA
13	T52578	INJECTOR	4.0	EA
14	T52576	DIPSTICK	1.0	EA
15	T52577	DIPSTICK TUBE	1.0	EA
16	T2744	DOWTY WASHER	1.0	EA
17	T50740	ENGINE TEMP. SWITCH	1.0	EA
18	T52640	FUEL SENDER	1.0	EA
19	T100378	CLAMP SPACER	1.0	EA



Engine Accessories

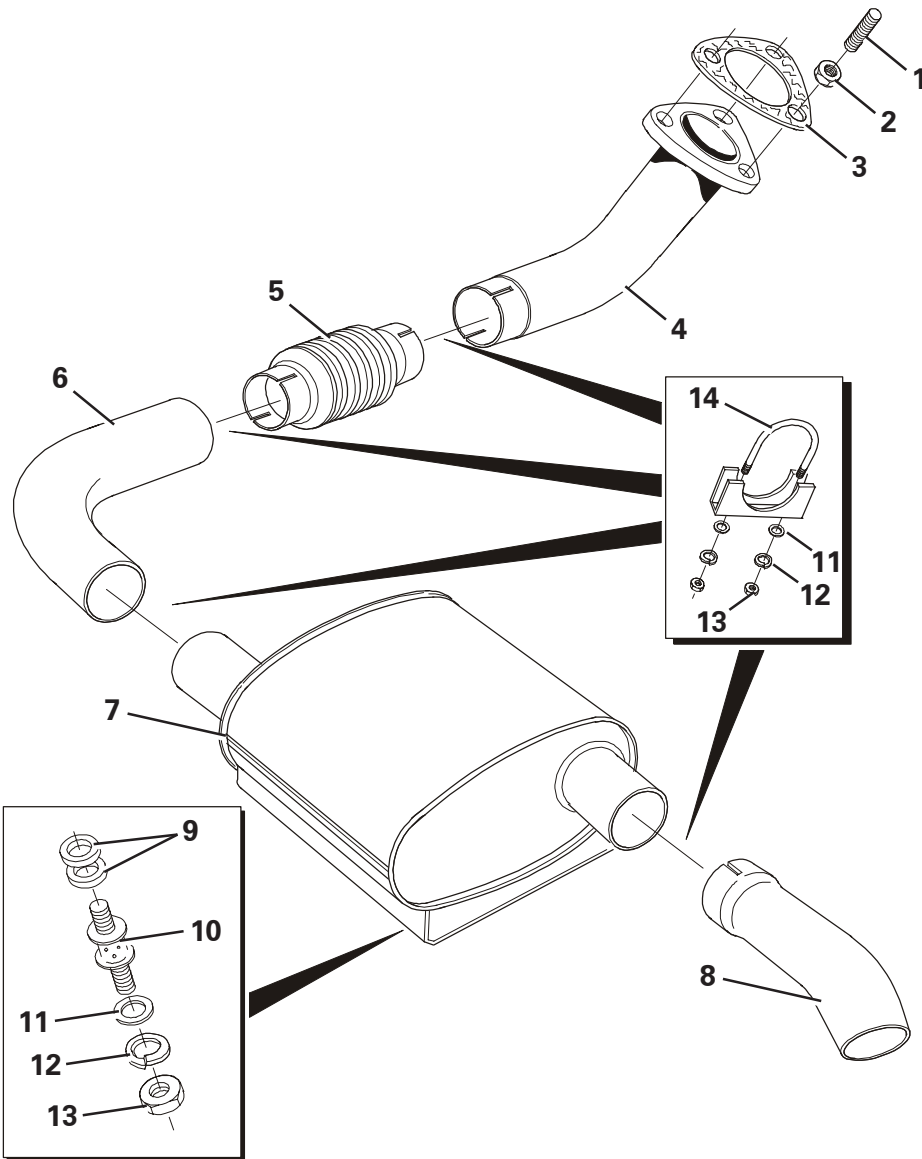
**ENGINE - OIL COOLER**



Item	Part No.	Description	Qty	U/M
1	KIT 229	ENGINE OIL COOLER KIT	1.0	EA
2	T52587	ELBOW	1.0	EA
3	T52597	CLIP	4.0	EA
4	T52584	ADAPTOR	1.0	EA
5	T52583	HOSE	1.0	EA
6	T52585	HOSE	1.0	EA
7	T52594	PIPE CLIP	2.0	EA
8	T52591	BOLT	2.0	EA
9	T52581	COOLER	1.0	EA
10	T52595	SEAL	1.0	EA
11	T52586	BOLT	2.0	EA
12	T52592	BOLT	2.0	EA
13	T50532	PRESSURE SWITCH	1.0	EA
14	T2486	OIL FILTER	1.0	EA
15	T52580	HEAD	1.0	EA
16	T52593	GASKET	2.0	EA
17	T52579	ADAPTOR	1.0	EA
18	T52623	BOLT	2.0	EA
19	T52596	GASKET	1.0	EA
20	T52582	BRACKET	1.0	EA

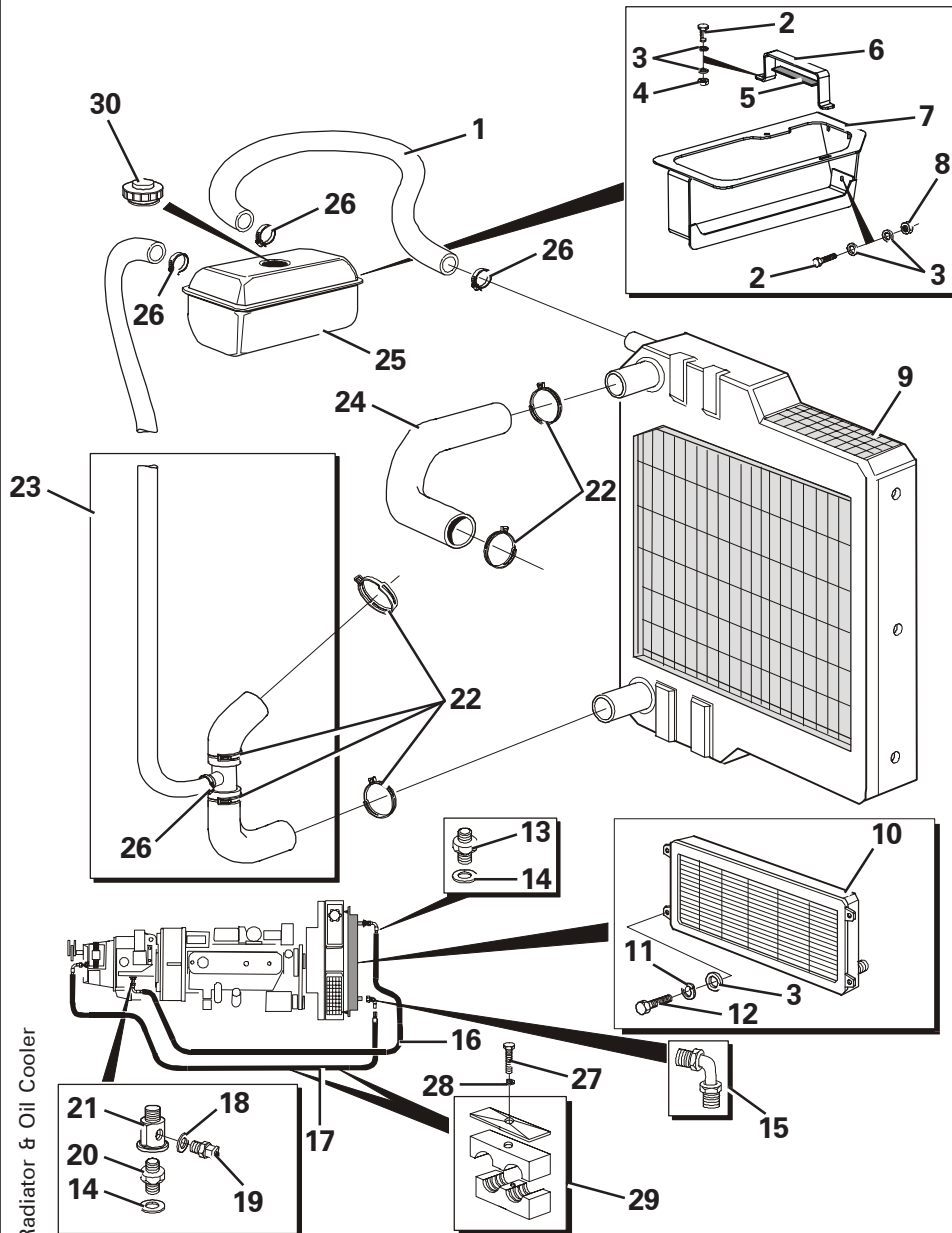
**EXHAUST SYSTEM - NAT ASP**

Item	Part No.	Description	Qty	U/M
1	T52570	STUD	3.0	EA
2	T52571	NUT	3.0	EA
3	T52435	EXHAUST GASKET	1.0	EA
4	T100238	MANIFOLD PIPE (NAT-ASP)	1.0	EA
5	T100275	EXHAUST FLEXIBLE PIPE	1.0	EA
6	T100056	EXHAUST INLET PIPE	1.0	EA
7	T100010	EXHAUST SILENCER	1.0	EA
8	T100057	EXHAUST TAILPIPE	1.0	EA
9	T9345	WASHER	6.0	EA
10	T100796	RUBBER BUFFER	3.0	EA
11	T12973	PLAIN WASHER	11.0	EA
12	T12972	SPRING WASHER	11.0	EA
13	T9775	NUT	11.0	EA
14	T15482	EXHAUST CLAMP	4.0	EA



Exhaust System

## RADIATOR & OIL COOLER

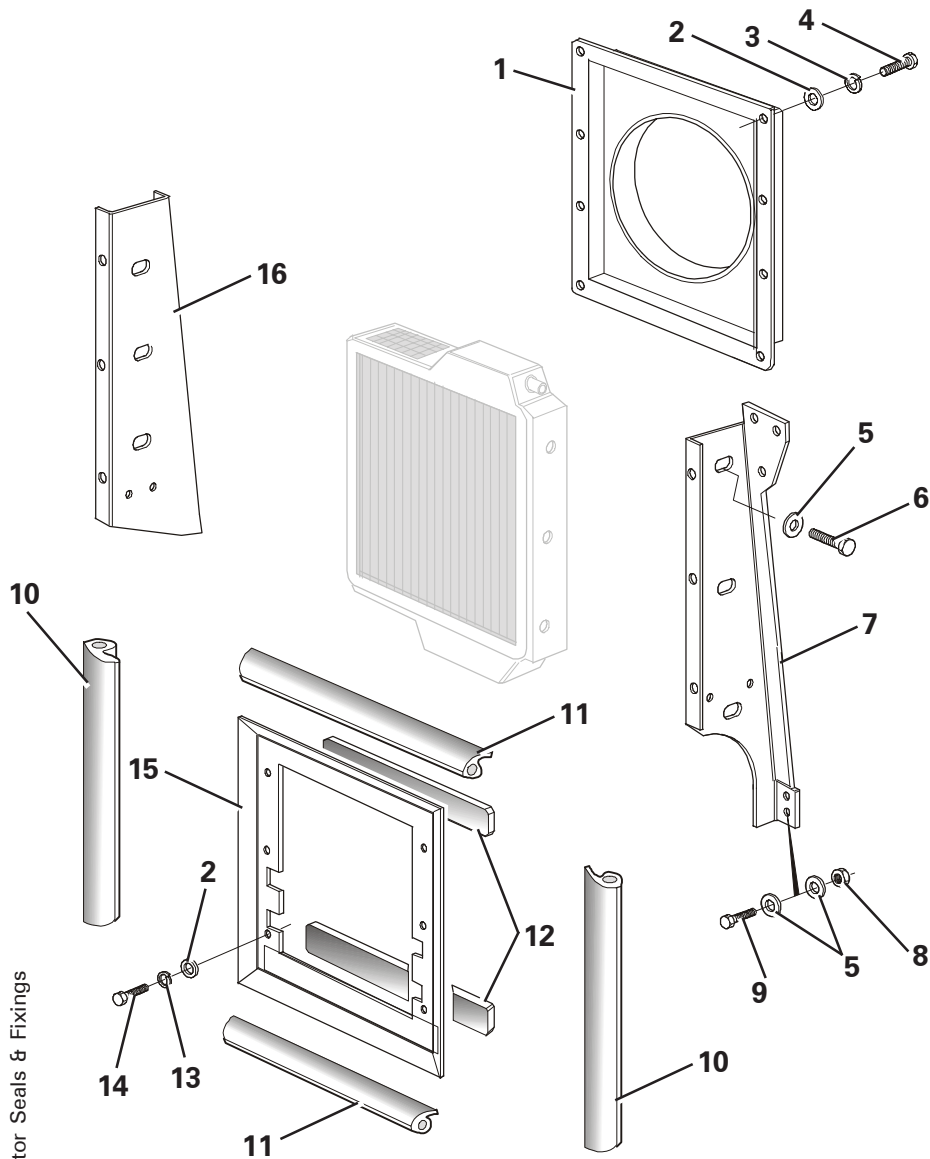


Item	Part No.	Description	Qty	U/M
1	T52656	HOSE - FILLER BOTTLE	1.0	EA
2	T16476	SET BOLT	4.0	EA
3	T13911	FLAT WASHER	12.0	EA
4	T10431	NUT	1.0	EA
5	T52660	SELF ADHESIVE STRIP	1.0	EA
6	T100568	RAD PRESSURE BOTTLE STRAP	1.0	EA
7	T100551	RAD BOTTLE MTG BRKT	1.0	EA
8	T16481	NYLOC NUT	3.0	EA
9	T52657	RADIATOR	1.0	EA
10	T52658	OIL COOLER	1.0	EA
11	T14837	SPRING WASHER	4.0	EA
12	T16477	HEAD BOLT	4.0	EA
13	T17315	ADAPTOR	1.0	EA
14	T5596	HYDRAULIC SEAL	2.0	EA
15	T100539	ELBOW	1.0	EA
16	T100204	OIL COOLER HOSE-OUTLET	1.0	EA
17	T100205	OIL COOLER HOSE-INLET	1.0	EA
18	T5637	BONDED SEAL	1.0	EA
19	T50531	TRANS.OIL TEMP.SWITCH	1.0	EA
20	T13791	ADAPTOR	1.0	EA
21	T100381	TEMPERATURE SENDER FITTING	1.0	EA
22	T100422	SPRING BAND CLAMP	6.0	EA
23	T100218	BOTTOM RADIATOR HOSE ASSY	1.0	EA
24	T100217	TOP RADIATOR HOSE	1.0	EA
25	T100550	PRESSURE FILLER BOTTLE	1.0	EA
26	T11401	JUBILEE CLIP	4.0	EA
27	T17157	BOLT	2.0	EA
28	T12973	PLAIN WASHER	2.0	EA
29	T19115	PIPE CLAMP	2.0	EA
30	T52703	FILLER BOTTLE CAP	1.0	EA

Radiator & Oil Cooler

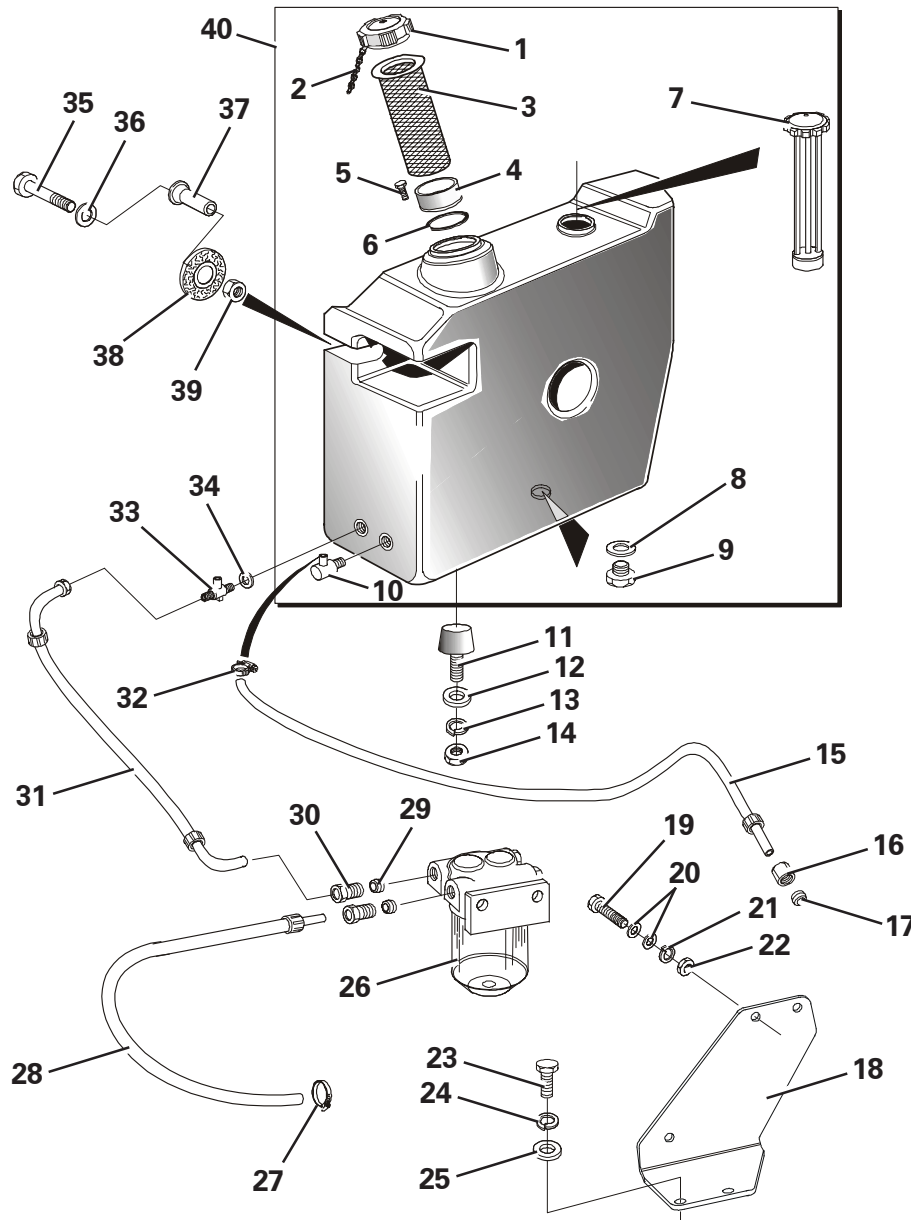
**RADIATOR SEALS AND FIXINGS**

Item	Part No.	Description	Qty	U/M
1	T52659	RADIATOR COWL	1.0	EA
2	T13911	FLAT WASHER	14.0	EA
3	T14837	SPRING WASHER	8.0	EA
4	T10917	SET BOLT	8.0	EA
5	T17184	HEAVY DUTY WASHER	14.0	EA
6	T7466	SET SCREW	6.0	EA
7	T100150	RAD MOUNTING BRKT R/H	1.0	EA
8	T13064	NUT	4.0	EA
9	T16505	SET BOLT	4.0	EA
10	T100535	SEAL	2.0	EA
11	T100534	SEAL	2.0	EA
12	T100668	D SECTION SEAL	2.0	EA
13	T10418	SHAKEPROOF WASHER	6.0	EA
14	T16477	HEAD BOLT	6.0	EA
15	T100397	RADIATOR COWL ASSY	1.0	EA
16	T100149	RAD MOUNTING BRKT L/H	1.0	EA



Radiator Seals & Fixings

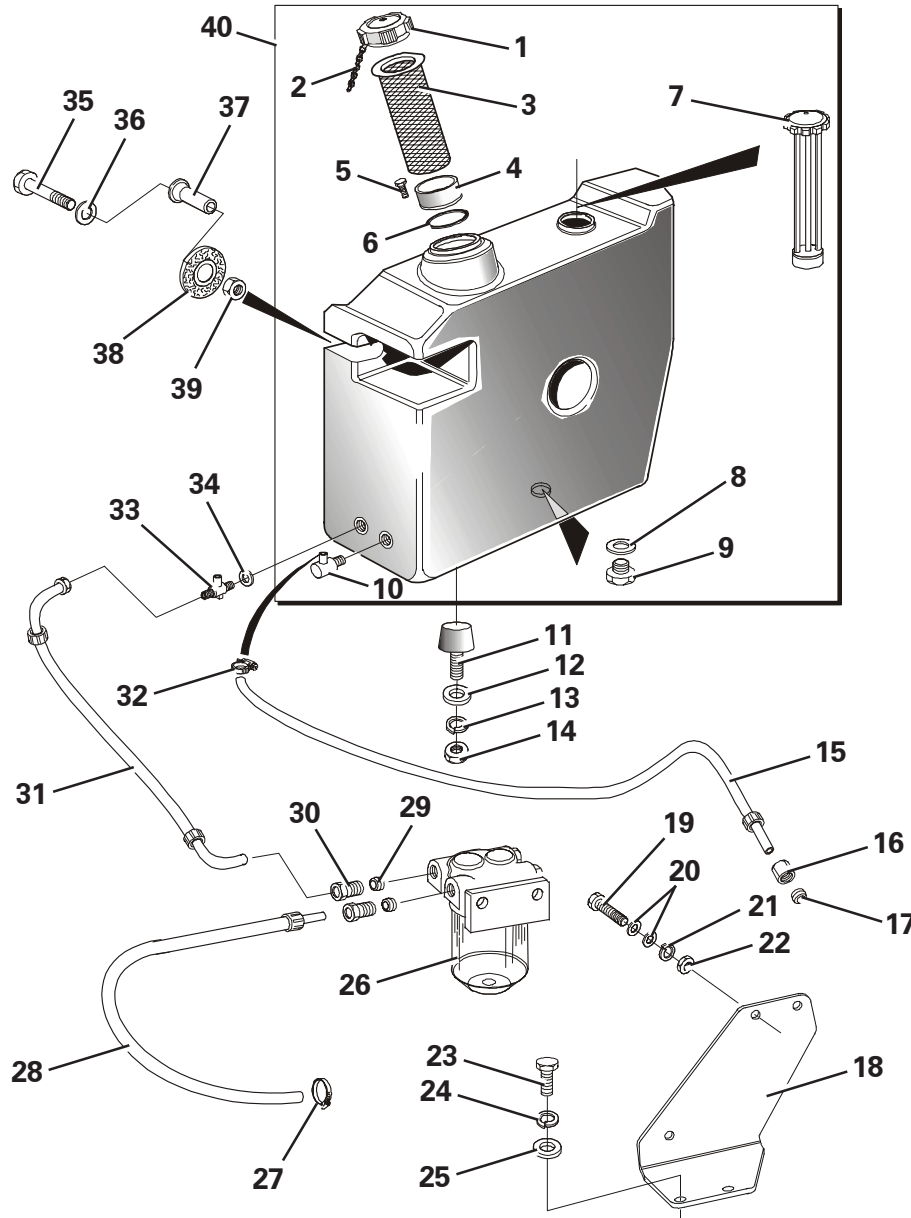
**FUEL TANK ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T52283	FUEL FILTER CAP	1.0	EA
2	T52437	FILLER CAP CHAIN	1.0	EA
3	T52284	STRAINER	1.0	EA
4	T52543	FILLER CAP COLLAR	1.0	EA
5	T52590	SCREW	4.0	EA
6	T52589	O RING	1.0	EA
7	T52281	LEVEL GAUGE (FUEL)	1.0	EA
8	T52588	FIBRE WASHER	1.0	EA
9	T52288	DRAIN PLUG	1.0	EA
10	T52372	FUEL RETURN ELBOW	1.0	EA
11	T100214	RUBBER BUFFER (NBR)	2.0	EA
12	T9345	WASHER PLATED	2.0	EA
13	T12972	SPRING WASHER	2.0	EA
14	T9775	NUT PLATED	2.0	EA
15	T100278	LEAK OFF PIPE	1.0	EA
16	T52601	NUT	1.0	EA
17	T52602	OLIVE	1.0	EA
18	T100608	FUEL SEDIMENTOR BRKT	1.0	EA
19	T16505	HEX HD SET BOLT	2.0	EA
20	T15819	PLAIN WASHER PLATED	4.0	EA

Fuel Tank Assembly

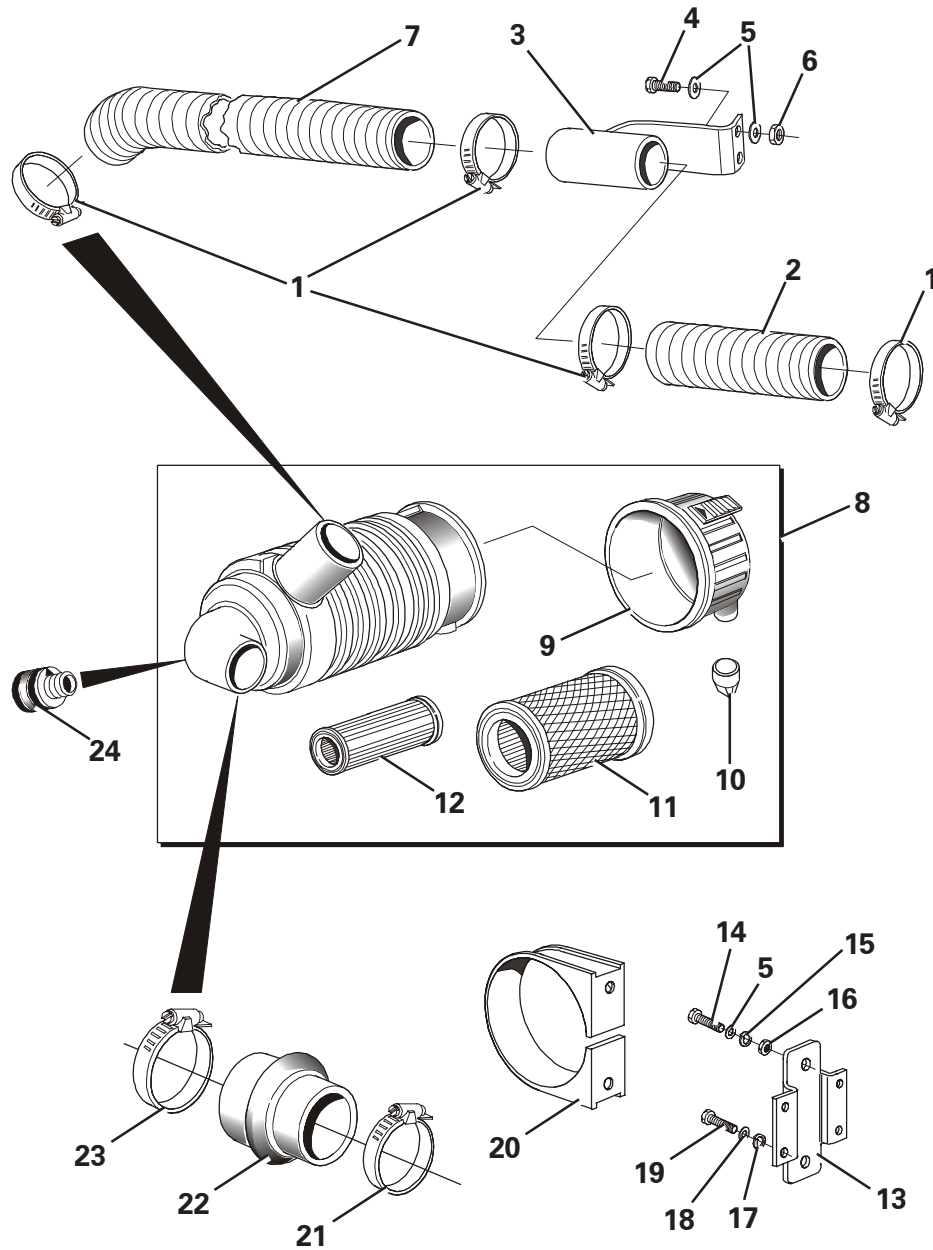
**FUEL TANK ASSEMBLY**



Item	Part No.	Description	Qty	U/M
21	T13362	SPRING WASHER PLATED	2.0	EA
22	T12509	NUT PLATED	2.0	EA
23	T14077	BOLT	2.0	EA
24	T6758	SPRING WASHER	2.0	EA
25	T14748	PLAIN WASHER	2.0	EA
26	T15247	SEDIMENTOR	1.0	EA
27	T100421	SPRING BAND CLAMP	1.0	EA
28	T100277	FUEL HOSE (BOWL/ENG)	1.0	EA
29	T14692	TUBE OLIVE	2.0	EA
30	T13827	TUBE NUT	2.0	EA
31	T100276	FUEL HOSE (TANK/BOWL)	1.0	EA
32	T100691	HOSE CLIP	1.0	EA
33	T5694	FUEL TAP	1.0	EA
34	T5695	FIBRE WASHER FUEL TAP	1.0	EA
35	T52092	BOLT HEX.HEAD	2.0	EA
36	T10734	H/DUTY WASHER PLATED	2.0	EA
37	T100372	TANK SPACER	2.0	EA
38	T100323	RUBBER BACKED WASHER	2.0	EA
39	T13064	NUT	2.0	EA
40	T100011	DIESEL TANK ASSY 70L	1.0	EA

Fuel Tank Assembly

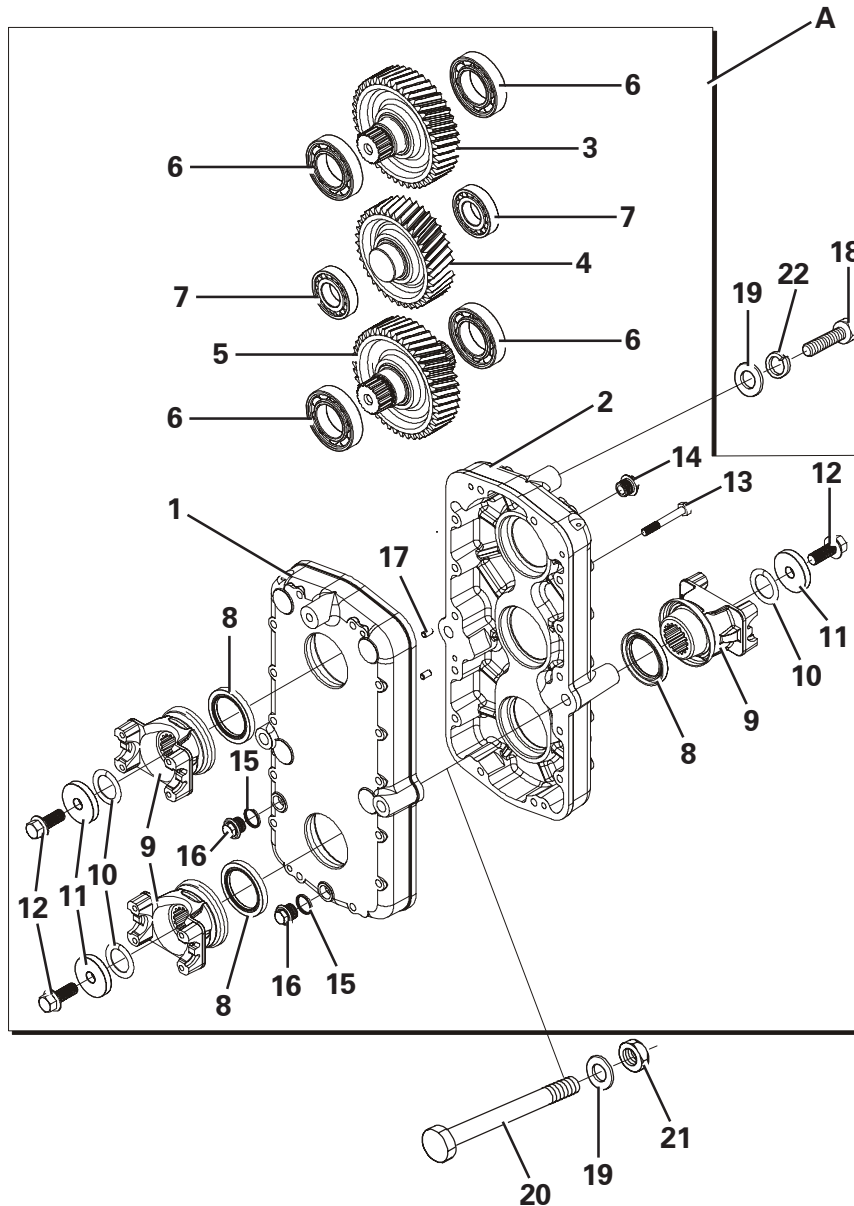
**AIR CLEANER ASSEMBLY - NAT ASP**



Item	Part No.	Description	Qty	U/M
1	T10895	JUBILEE CLIP	4.0	EA
2	T100481	INLET HOSE	1.0	EA
3	T100474	AIR TUBE SUPPORT	1.0	EA
4	T14152	BOLT	2.0	EA
5	T12973	PLAIN WASHER PLATED	6.0	EA
6	T13457	NYLOC NUT	2.0	EA
7	T100283	INLET HOSE	1.0	EA
8	T100007	AIR CLEANER 8 TWISTLOCK	1.0	EA
9	T52558	DUST BOWL	1.0	EA
10	T52559	VAC VALVE	1.0	EA
11	T52556	OUTER AIR ELEMENT	1.0	EA
12	T52557	INNER AIR ELEMENT	1.0	EA
13	T100152	AIR CLEANER BRACKET	1.0	EA
14	T14277	BOLT	2.0	EA
15	T12972	SPRING WASHER	2.0	EA
16	T9775	NUT PLATED	2.0	EA
17	T13362	SPRING WASHER	4.0	EA
18	T17184	HEAVY DUTY WASHER	4.0	EA
19	T16770	CAP HEAD SCREW	4.0	EA
20	T100008	BRACKET AIR CLEANER	1.0	EA
21	T52555	T BOLT CLAMP	1.0	EA
22	T100009	HOSE A/C TO ENG NAT/ASP	1.0	EA
23	T52554	T BOLT CLAMP	1.0	EA
24	T100282	RESTRICTION INDICATOR	1.0	EA

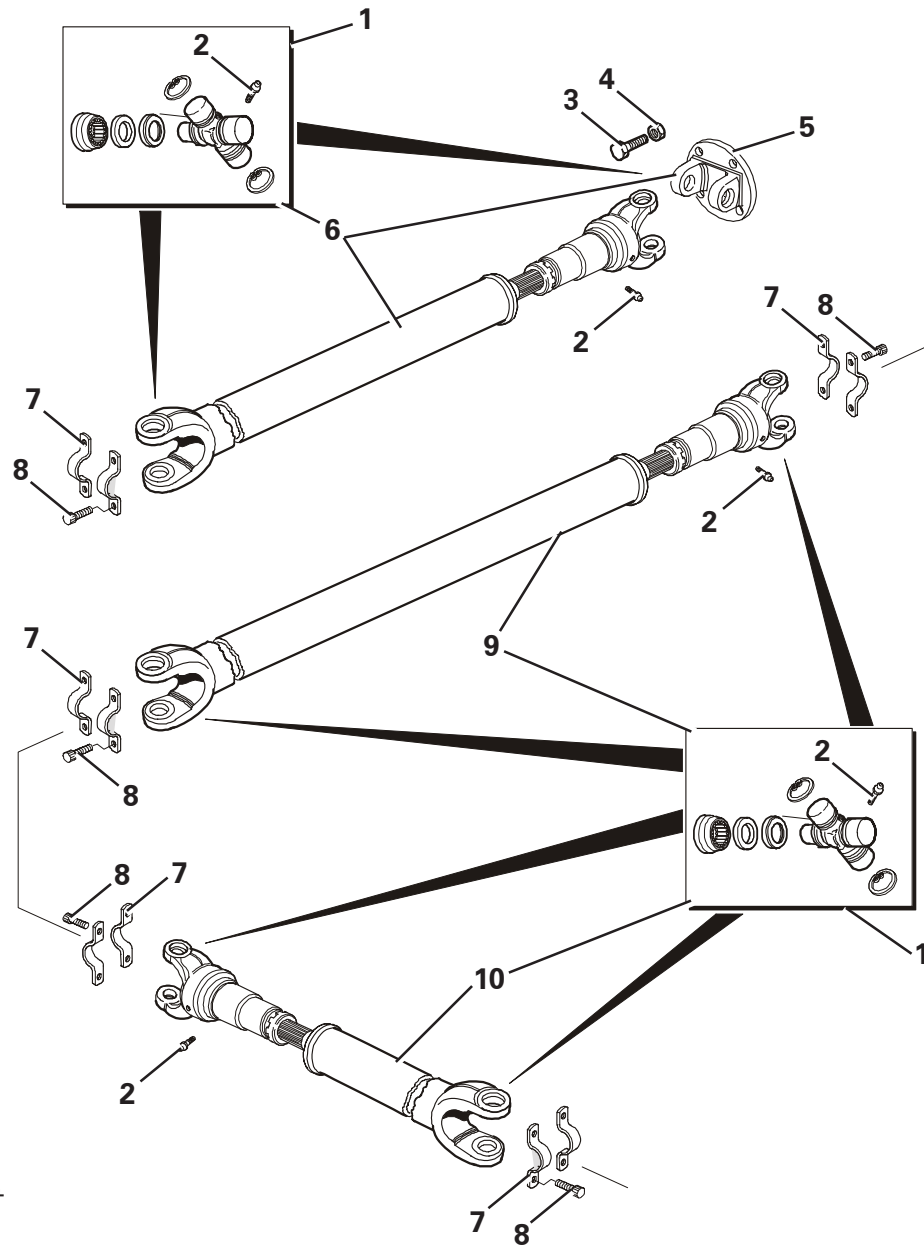
Air Cleaner Assembly N/Asp

**TRANSFER BOX ASSEMBLY**



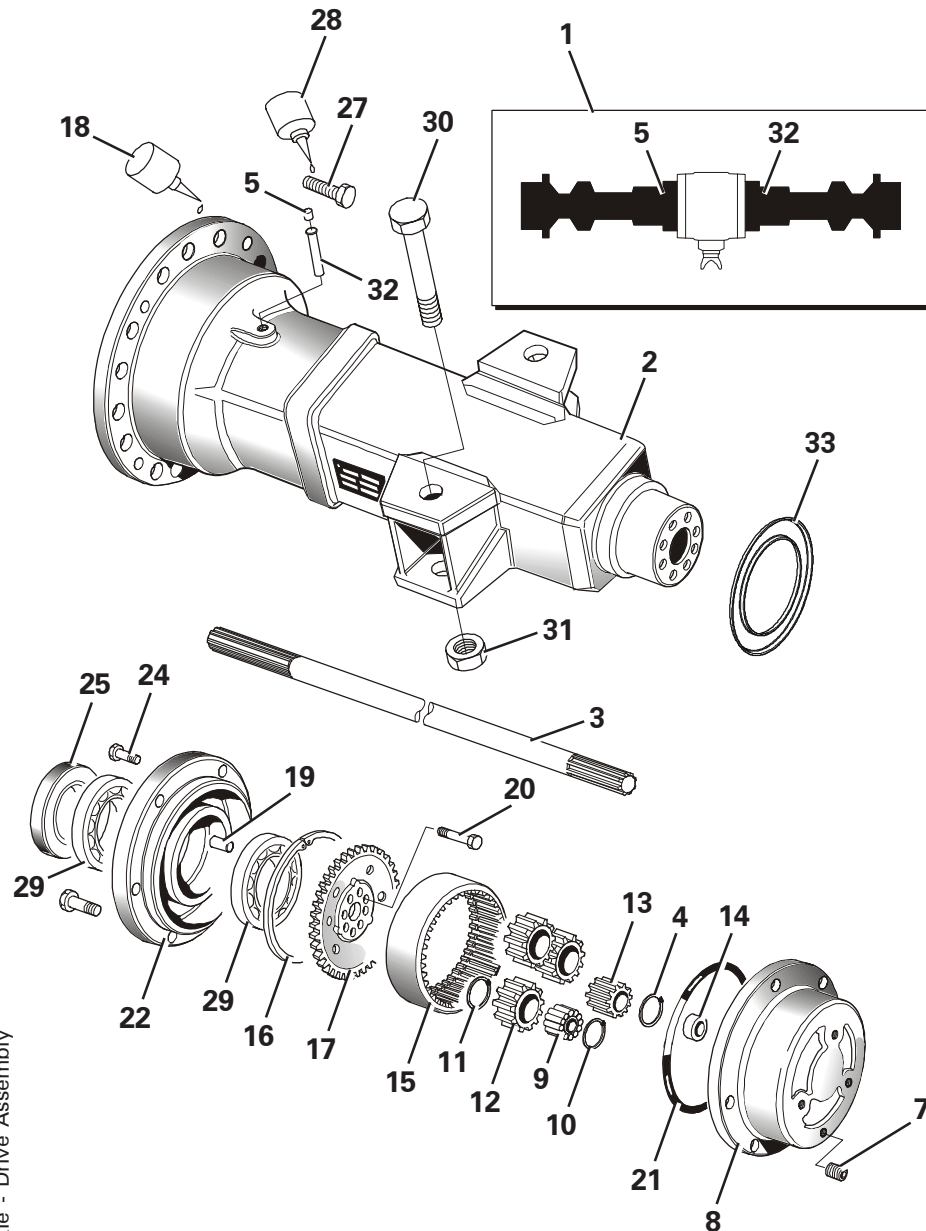
Item	Part No.	Description	Qty	U/M
A*	T100679	TRANSFER CASE ASSEMBLY	1.0	EA
1	T52607	GEARCASE HALF	1.0	EA
2	T52609	GEARCASE HALF	1.0	EA
3	T52604	INPUT GEAR	1.0	EA
4	T52612	IDLER GEAR	1.0	EA
5	T52613	OUTPUT GEAR	1.0	EA
6	T52606	BALL BEARING	4.0	EA
7	T2642	ROLLER BEARING	2.0	EA
8	T52614	OUTPUT SEAL	3.0	EA
9	T52616	YOKE ASSY	3.0	EA
10	T52608	O RING	3.0	EA
11	T52605	WASHER	3.0	EA
12	T52615	BOLT - DURLOCK	3.0	EA
13	T52611	BOLT	14.0	EA
14	T52610	BREATHER	1.0	EA
15	T50423	BOND SEAL	2.0	EA
16	T4248	PLUG	2.0	EA
17	T2731	DOWEL	2.0	EA
18*	T11316	BOLT	1.0	EA
19*	T100867	PLAIN WASHER	3.0	EA
20*	T100817	BOLT	2.0	EA
21	T14910	STOVER NUT	2.0	EA
22	T100387	SPRING WASHER	1.0	EA

**PROPSHAFTS**



Item	Part No.	Description	Qty	U/M
1	T50475	U/J KIT	6.0	EA
2	T13454	STRAIGHT GREASE NIPPLE	9.0	EA
3	T11313	PROPSHAFT BOLT	4.0	EA
4	T11345	PHILIDAS NUT	4.0	EA
5	T50476	FLANGE	1.0	EA
6	T100004	PROPSHAFT TOP	1.0	EA
7	T14130	JOINT STRAP	10.0	EA
8	T14131	CLAMP BOLT	20.0	EA
9	T100005	PROPSHAFT REAR	1.0	EA
10	T17485	PROPSHAFT FRONT	1.0	EA

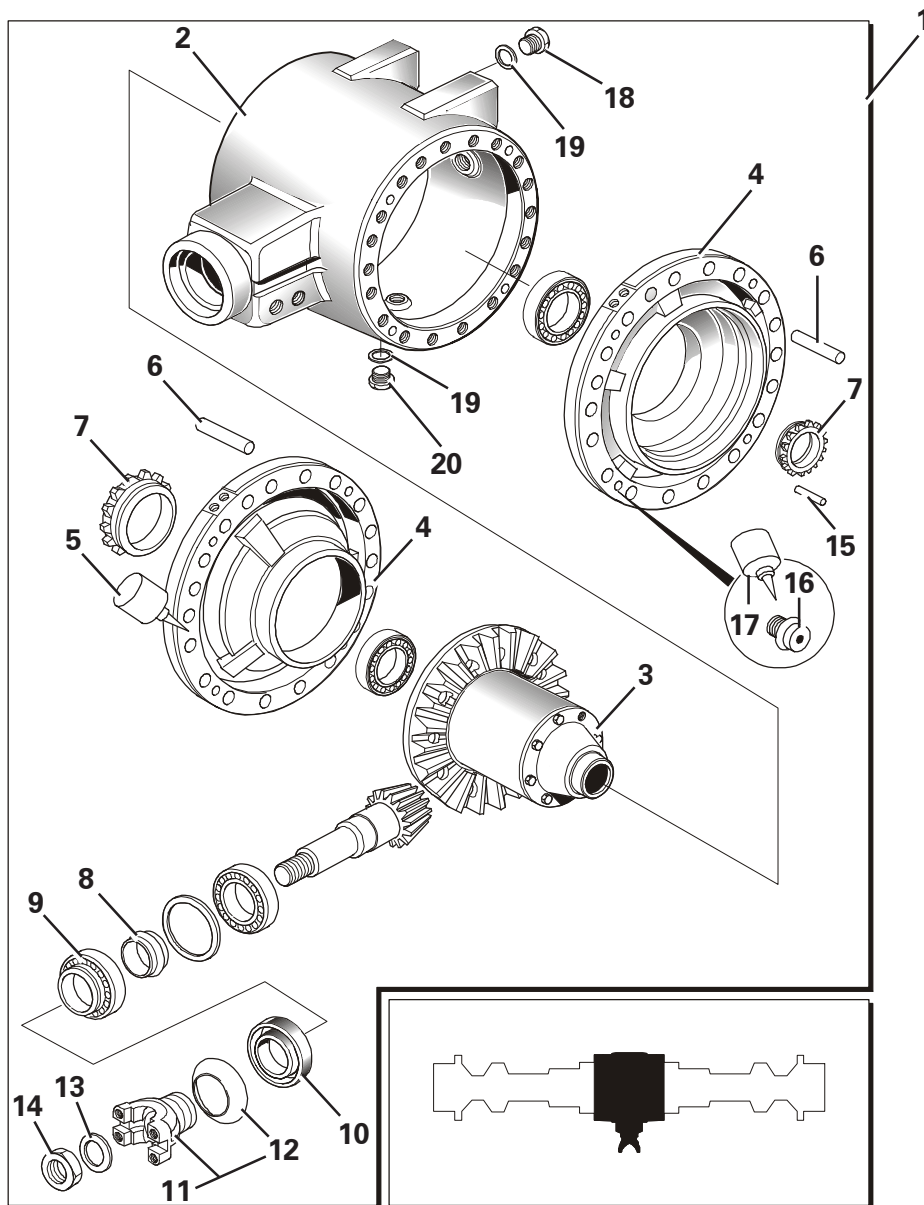
**AXLE - DRIVE ASSEMBLY**



Item	Part No.	Description	Qty	U/M
1	T14123	AXLE	1.0	EA
2	T1924	AXLE ARM CASING	2.0	EA
3	T51852	SHAFT	2.0	EA
4	T51851	CIRCLIP	2.0	EA
5	T50737	BREATHER PLUG	1.0	EA
7	T2305	PLUG	2.0	EA
8	T50380	CARRIER PLANETARY HUB	2.0	EA
9	T2299	BEARING DOUBLE ROLLER	6.0	EA
10	T2300	CIRCLIP 'L' SHAPED	12.0	EA
11	T2297	CIRCLIP	6.0	EA
12	T2298	PLANET GEAR	6.0	EA
13	T50387	SUN GEAR	2.0	EA
14	T2303	THRUST PAD	2.0	EA
15	T2296	GEAR ANNULUS RING	2.0	EA
16	T2292	CIRCLIP EXTERNAL	2.0	EA
17	T1926	CARRIER	2.0	EA
18	T2267	SEALANT	A/R	EA
19	T1925	HOLLOW DOWEL	16.0	EA
20	T1923	BOLT	16.0	EA
21	T51882	SEALANT	2.0	EA
22	T52254	HUB	2.0	EA
24	T50519	SET SCREW	4.0	EA
25	T50661	SEAL	2.0	EA
27	T50520	BOLT	32.0	EA
28	T2267	SEALANT	A/R	EA
29	T2291	TAPER BEARING	4.0	EA
30	T14133	BOLT	4.0	EA
31	T10331	LOCKNUT	4.0	EA
32	T2279	BREATHER	1.0	EA
33*	T53036	COVER PLATE HUB	2.0	EA

Axle - Drive Assembly

**AXLE - DIFFERENTIAL ASSEMBLY**

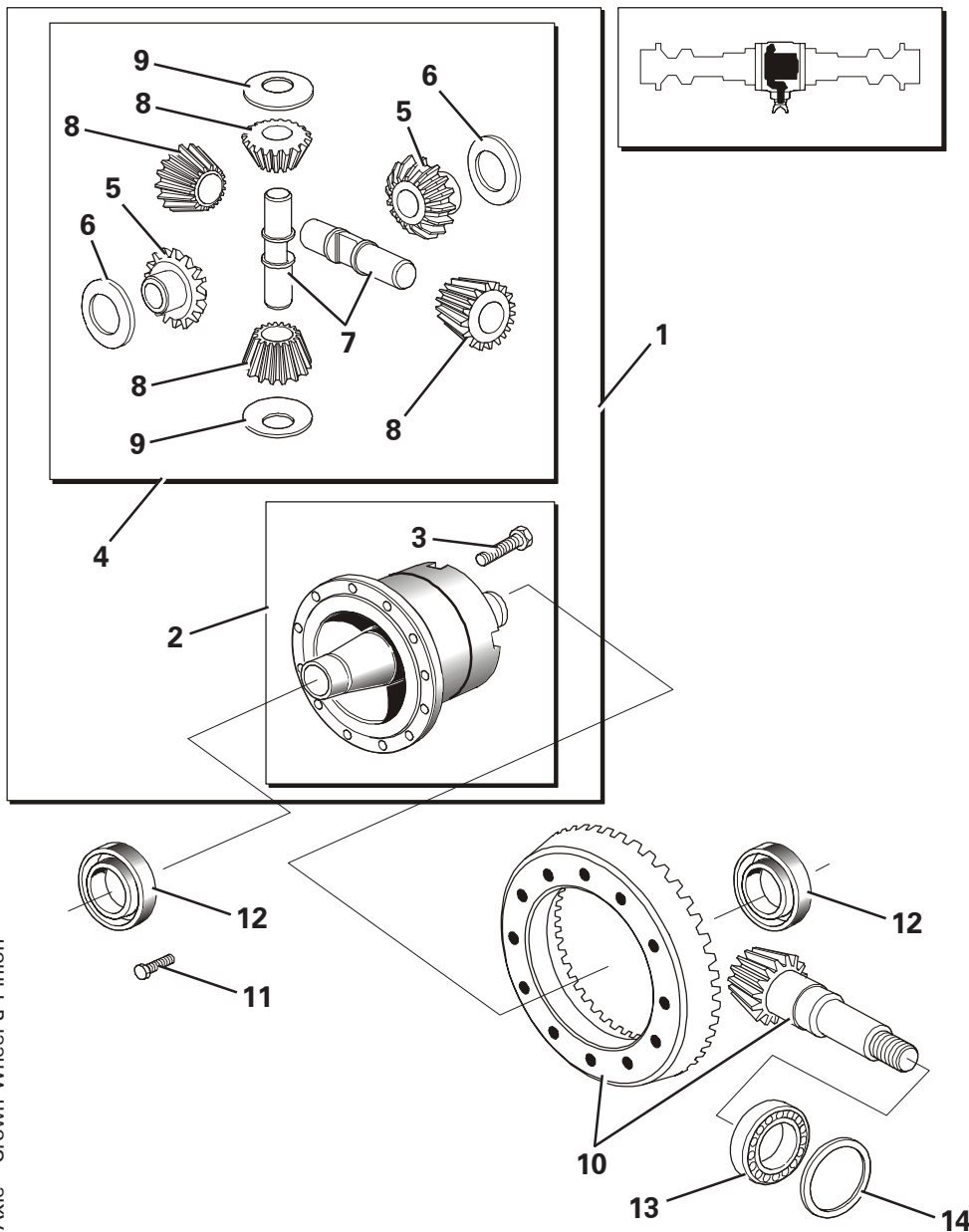


Item	Part No.	Description	Qty	U/M
1	T52618	DIFFERENTIAL ASSEMBLY	1.0	EA
2	T51988	DRIVE HEAD CASING	1.0	EA
3	Refer to:	Axle - Crown Wheel & Pinion		
4	T52511	HOUSING	2.0	EA
5	T2267	SEALANT	A/R	EA
6	T2266	DOWEL	4.0	EA
7	T2261	NUT (SIDE DIFF)	2.0	EA
8	T2577	SPACER-COLLAPSEABLE	1.0	EA
9	T3519	BEARING	1.0	EA
10	T50398	TRIPLE LIP SEAL	1.0	EA
11	T50399	YOKE FLANGE COUPLING	1.0	EA
12		Non Serviced Part		
13		Supplied with Item 14		
14	T51880	NUT	1.0	EA
15	T50396	TENSION PIN	2.0	EA
16	T50518	BOLT	8.0	EA
17	T2286	LOCKING FLUID	A/R	EA
18	T2277	FILLER PLUG	1.0	EA
19	T2278	WASHER	1.0	EA
20	T2243	DRAIN PLUG	1.0	EA

Axle - Differential Assembly

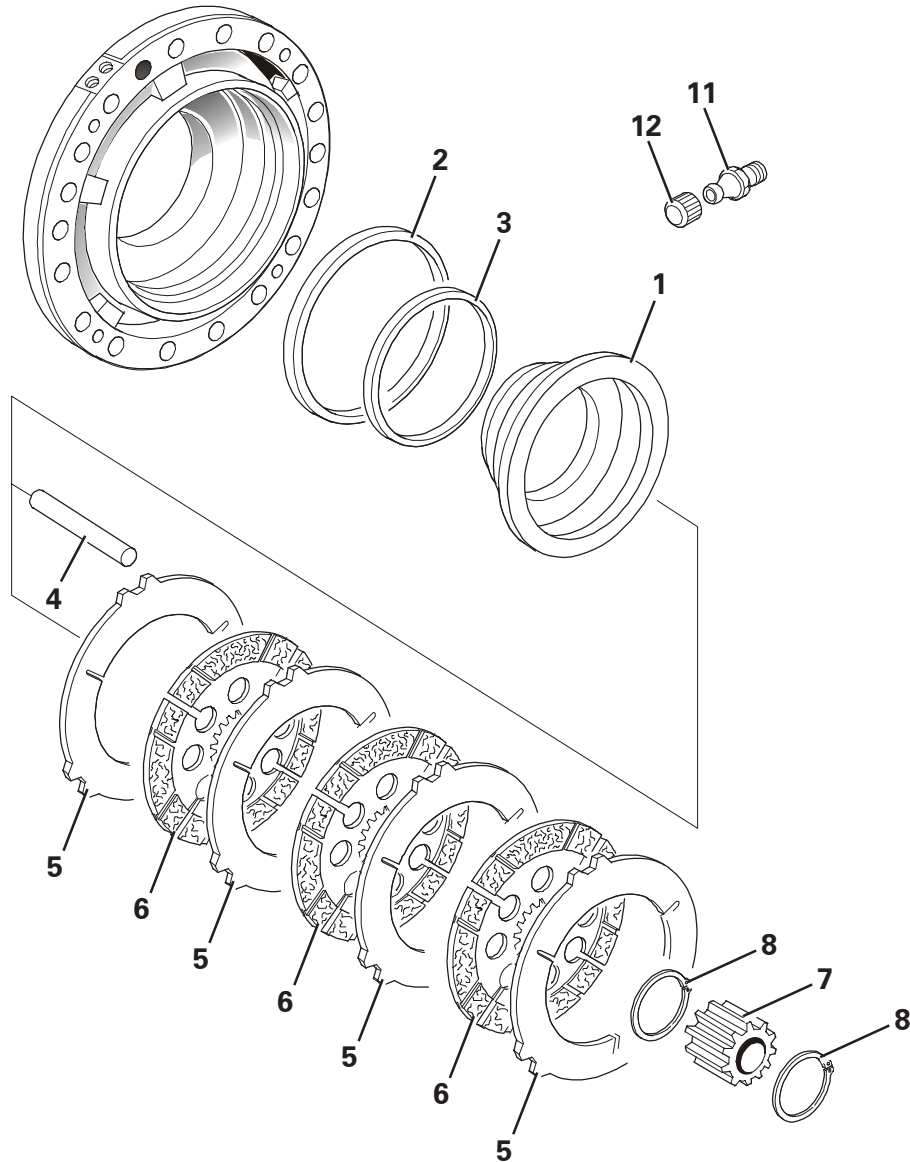
**AXLE - CROWN WHEEL & PINION**

Item	Part No.	Description	Qty	U/M
1	T2239	G A DIFFERENTIAL	1.0	EA
2	T2257	DIFFERENTIAL CASE	1.0	EA
3	T2255	BOLT	8.0	EA
4	T51881	GEAR PIN & WASHER SET	1.0	EA
5		Non Serviced Part		
6	T2242	THRUST WASHER (SIDE)	2.0	EA
7	T2240	TRUNNION PIN	2.0	EA
8		Non Serviced Part		
9	T2241	THRUST WASHER (PINION)	4.0	EA
10	T52444	CROWN/PINION	1.0	EA
11	T2256	BOLT	12.0	EA
12	T3070	HUB INNER BEARING	2.0	EA
13	T2253	BEARING TAPER	1.0	EA
14	T2252	SHIM KIT	1.0	EA



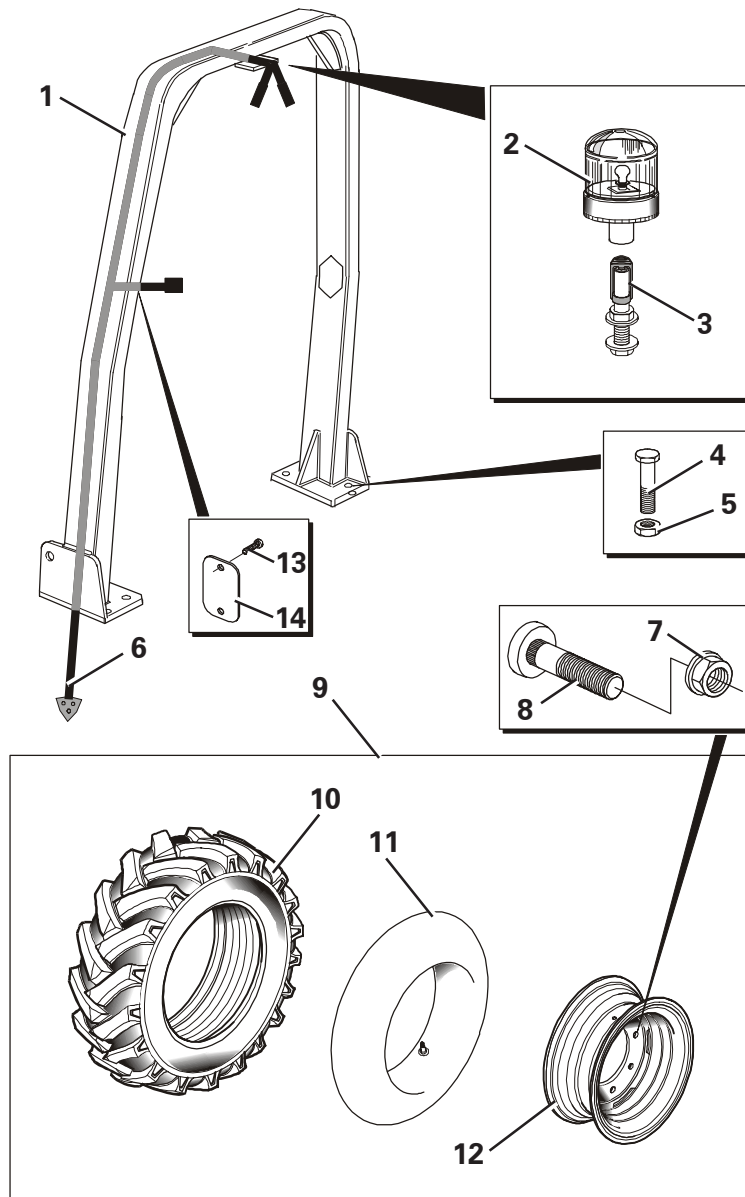
Axle - Crown Wheel & Pinion

**AXLE - BRAKES**



Item	Part No.	Description	Qty	U/M
1	T52512	PISTON	2.0	EA
2	T2269	SEAL (BRAKE PISTON)	2.0	EA
3	T50384	PISTON SEAL	2.0	EA
4	T2272	REACTION PIN	6.0	EA
5*	T53101	COUNTER PLATE	8.0	EA
6*	T53100	FRICTION PLATE	6.0	EA
7	T2275	PLATE CARRIER	2.0	EA
8	T2276	CIRCLIP EXTERNAL	4.0	EA
11	T2263	BLEED NIPPLE	2.0	EA
12	T2262	CAP (BLEED NIPPLE)	2.0	EA

**ROPS FRAME & WHEEL ASSEMBLY**



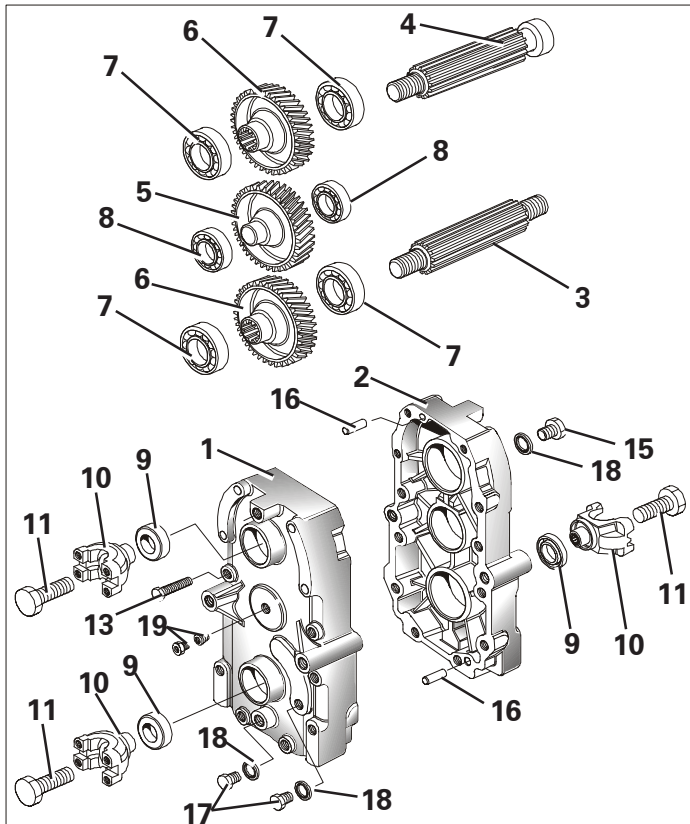
Item	Part No.	Description	Qty	U/M
1	T100025	ROPS FRAME	1.0	EA
2	T100133	ROTATING BEACON	1.0	EA
3	T100134	BEACON STEM	1.0	EA
4	T15571	BOLT	8.0	EA
5	T14910	STOVER NUT	8.0	EA
6	T100051	HARNESS	1.0	EA
7	T14132	WHEEL NUT	20.0	EA
8	T2288	WHEEL STUD	20.0	EA
9	T20954	WHEEL ASSY	4.0	EA
10	T20955	TYRE	1.0	EA
11	T17470	INNER TUBE	1.0	EA
12	T17457	WHEEL RIM	1.0	EA
13	T7474	SELF TAPPER	2.0	EA
14	T100804	COVER PLATE	1.0	EA

**OPTIONAL EXTRAS**

Part No.	Description	Qty	U/M
KIT 241	ACCESSORIES - ROTATING BEACON KIT	1.0	EA
T100307	ROTATING FLEXIBLE BEACON	1.0	EA
T100308	XENON BEACON	1.0	EA
KIT 232	ACCESSORIES - POWERSHUTTLE REVERSE ALARM	1.0	EA
KIT 242	ACCESSORIES - ELECTRONIC SHUTDOWN	1.0	EA
T100135	WORK LIGHT	1.0	EA
T18236	LOW BRAKE FLUID WARNING CAP	1.0	EA
KIT 236	ACCESSORIES - LIGHT KIT POWERSWIVEL (UK)	1.0	EA
KIT 237	ACCESSORIES - LIGHT KIT POWERSWIVEL (CONT)	1.0	EA
KIT 238	ACCESSORIES - HINGED ROPS FRAME KIT	1.0	EA
KIT 239	ACCESSORIES - TIPPING VALVE LOCK	1.0	EA
KIT 240	ACCESSORIES - ADJUSTABLE TOWING BRACKET	1.0	EA
KIT 85	ACCESSORIES - ROAD EQUIPMENT KIT	1.0	EA
KIT 243	TRANSFER SET - 5 TONNE	1.0	EA

**MODIFIED AND ADDITIONAL PARTS**

Old Part No.	Qty	Description	Page	Item	Prefix	New Part No.
T17483	1.0	TRANSFER CASE ASSEMBLY	40	A	2	T100679
T11315	1.0	BOLT	40	18	2	T11316
T17488	2.0	BOLT	40	20	2	T100817
ADDED	2.0	WASHER	40	19	2	T100867
T19115	1.0	PIPE CLAMP	14	11	-	T101042
ADDED	1.0	RETROFIT HOURMETER FIX LOOM	14	14	-	T101059



**TRANSFER BOX ASSEMBLY - T17483**

Item	Part No.	Description	Qty	U/M
1	T51940	CASE (FRONT)	1.0	EA
2	T51941	CASE (REAR)	1.0	EA
3	T52442	OUTPUT SHAFT	1.0	EA
4	T52443	INPUT SHAFT	1.0	EA
5	T50527	IDLER GEAR 49T	1.0	EA
6	T50470	GEAR 47T	2.0	EA
7	T50471	BEARING	4.0	EA
8	T50526	BEARING TAPER ROLLER	2.0	EA
9	T50398	TRIPLE LIP SEAL	3.0	EA
10	T50399	YOKE FLANGE COUPLING	3.0	EA
11	T52168	BOLT	3.0	EA
13	T52092	BOLT HEX.HEAD	12.0	EA
15	T50473	PLUG - BREATHER	1.0	EA
16	T50339	DOWEL	2.0	EA
17	T1948	PLUG	2.0	EA
18	T2613	SEAL	3.0	EA
19	T50343	PLUG	1.0	EA

**MODIFIED AND ADDITIONAL PARTS TO AXLES - T14123**

Old Part No.	Qty	Description	Page	Item	Serial No.	New Part No.
ADDED	2.0	COVER PLATE HUB	42	33	-	T53036
T51843	8.0	COUNTER PLATE	45	5	-	T53101
T51844	6.0	FRICTION PLATE	45	6	-	T53100

**MODIFIED AND ADDITIONAL PARTS**

Old Part No.	Qty	Description	Page	Item	Prefix	New Part No.
--------------	-----	-------------	------	------	--------	--------------

## Service and Warranty

Thwaites give a warranty which, subject to certain conditions, gives an assurance as to the quality of their product.

### The Thwaites warranty states:-

In the manufacture of Thwaites machines we endeavour to ensure that only the best workmanship and materials are used. Consequently, provided:-

1. The machine has been properly used in accordance with our recommendations and,
2. That no alterations have been made to the machine without prior written approval and,
3. That the machine has been maintained, serviced and lubricated in accordance with our recommendations and,
4. That Thwaites Warranty Certificate and/or New Machine Delivery Report has been completed and received by Thwaites within one month of delivery to the user.
5. That Thwaites receive a correctly completed Warranty Claim form within thirty days of the failure occurring.
6. **UK**  
That the alleged defective parts are returned to Thwaites within 6 weeks of date of failure.
7. **All other territories**  
That unless otherwise instructed the alleged defective parts are to be stored for inspection for a 6 month period from date of failure.

We will examine the alleged defective part and if we are reasonably satisfied that any defect is solely due to bad workmanship or materials, we will at our cost and at our option either repair any defective part or supply a replacement part in full discharge of all obligations upon us.

This warranty does not, however, extend to reconditioned or second-hand machines. For the avoidance of doubt, we will not entertain any other claims of a direct or consequential nature of whatsoever description and our responsibility is limited to the above.

The above warranty shall in no way detract from your statutory rights

#### **Warranty**

It is important to use only genuine Thwaites Limited spare parts and to adhere strictly to the conditions of operation and maintenance laid down by Thwaites Limited.

**Your warranty may be invalidated if you do not comply with the above recommendations.**