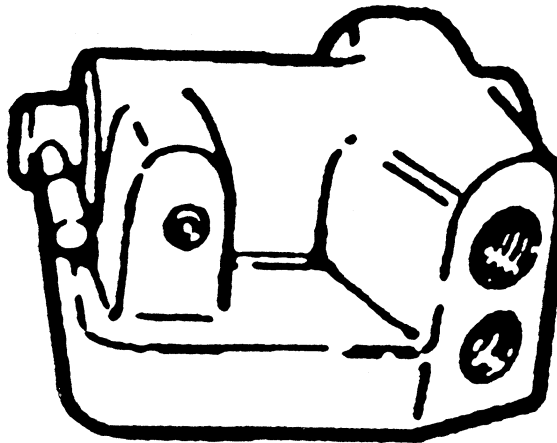


VALVE SÉLECTRICE SELECTOR VALVE

LA VALVE SÉLECTRICE S60032 TRANSFÈRE LE CIRCUIT HYDRAULIQUE DU TRACTEUR
POUR UNE AUTRE APPLICATION, SOIT POUR UN CHARGEUR AVANT OU SOIT POUR UNE MACHINE ARRIÈRE.



S60032

Valve sélectrice double avec deux sorties et un retour. Cette valve sélectrice permet de diriger à deux endroits différents le circuit hydraulique du tracteur. Le retour peut servir pour les deux sorties en utilisant l'accouplement rapide (quick coupler).

Double selector valve.

Combination one-way or two-way isolator-selector allows single acting or double acting external hydraulic service. Fits T035 & later models thru MF1080, without individual external hydraulic systems. Two position spool allows one-way (push) for single acting cylinder. Can also be used to feed power to a 4-way control valve for two-way (push-pull) operation of a double acting cylinder.

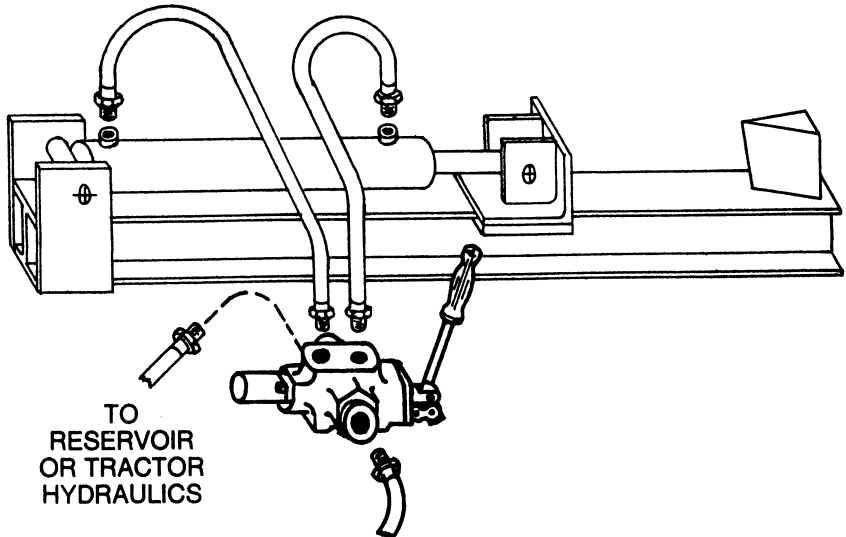
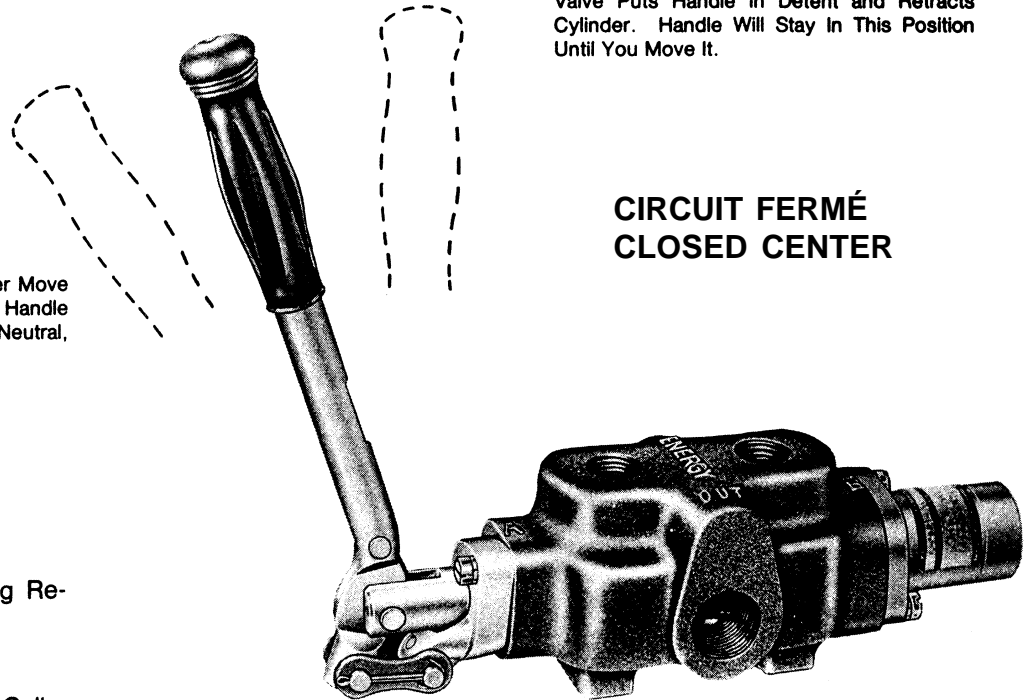
NEUTRAL: Cylinder Ports Blocked. Inlet Port Blocked (Closed Center).

DETENT RETRACT: Moving Handle Toward Valve Puts Handle In Detent and Retracts Cylinder. Handle Will Stay In This Position Until You Move It.

EXTEND CYLINDER: To Extend Cylinder Move Handle Away From Valve. Release Handle and Spring Return Shifts Valve To Neutral, Thus Stopping Cylinder.

**CIRCUIT FERMÉ
CLOSED CENTER**

- Detent In One Position-Spring Return In Opposite Position
- 20 GPM Rated Flow
- 4-Way (For Double Acting Cylinders)
- All Spools Are Precision Honed and Plated
- Spools Are Hydraulically Balanced
- No Relief Valve With Closed Center
- ½" NPTF Cylinder Ports
¾" NPTF Flow Ports
- Pressure Ratings: Maximum Working Pressure In Valve 2500 PSI
- Designed For Woodsplitters Using Tractor Hydraulics With Closed Center Systems.

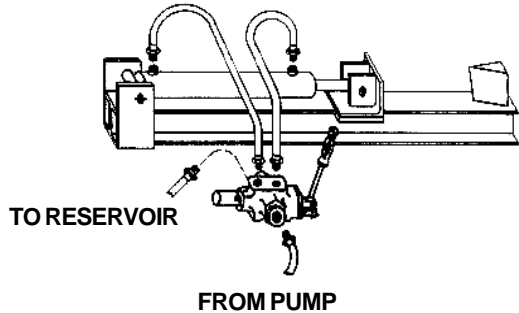


FROM PUMP OR TRACTOR HYDRAULICS

IDÉAL POUR FENDEUSES À BOIS / IDEAL FOR WOODSPLITTERS

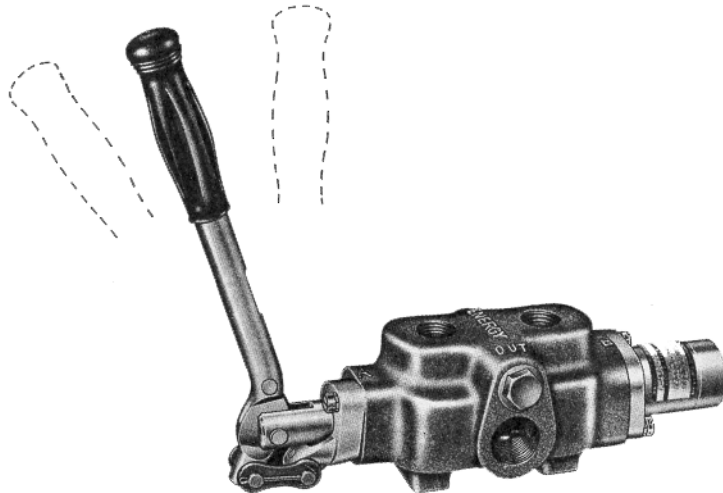
NUMÉRO NUMBER	DESCRIPTION
DSK200CLO	Valve contrôle (circuit fermé). Idéal pour fendeuses à bois. Control valve (closed center). Ideal for woodsplitters.

- Hydraulic Kick-out in one position spring return in opposite position
- 20 GPM rated flow
- 4-Way (for double acting cylinders)
- All spools are precision honed and plated
- Spools are hydraulically balanced
- Built-in adjustable relief valve
- 1/2" NPTF Cylinder ports 3/4" NPTF Flow parts
- Pressure ratings : Adjustable relief valve is set at approximately 1800 PSI, other settings available
- Pressure "Kick-out" is at approximately 700 to 1000 PSI and is not adjustable



NEUTRAL : Cylinder ports blocked. Oil circulates from pump thru valve and back to the tank

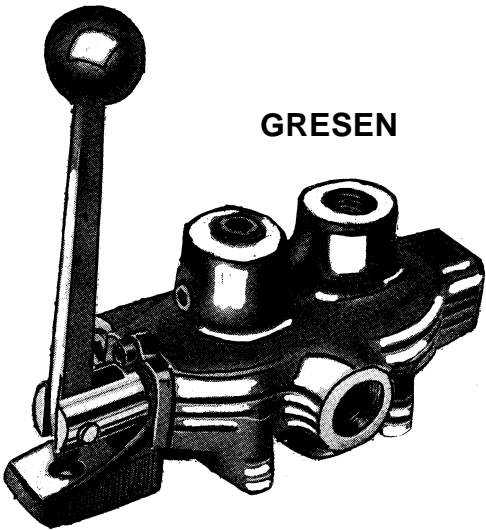
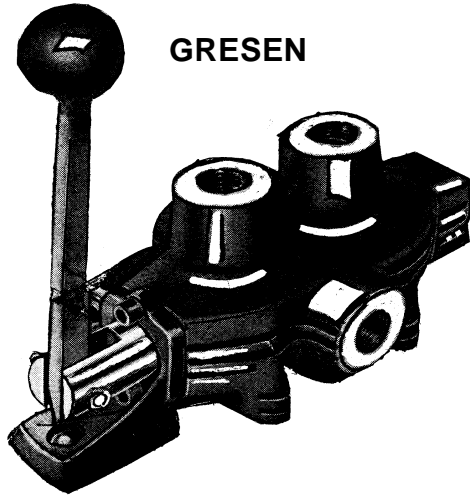
For satisfactory operation we recommend 30 micron filtration or better



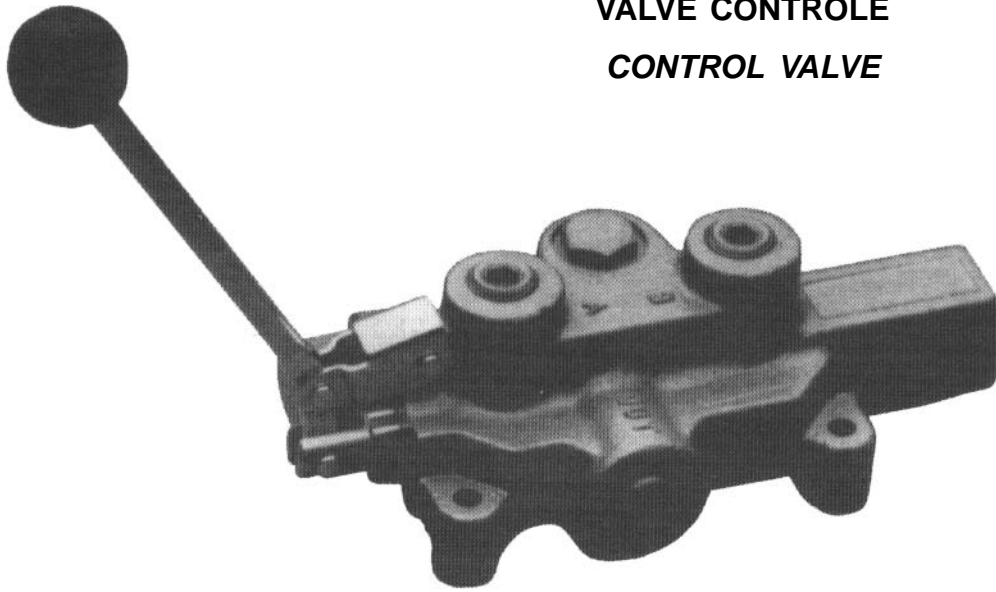
EXTEND CYLINDER : To extend moved handle away from valve. When handle released spring return shifts handle to neutral shopping cylinder.

PRESSURE KICK-OUT RETRACT : Moving handle toward valve puts valve in detent and retracts cylinder. When cylinder is completely retracted pressure kick-out shifts valve to neutral.

NUMÉROS NUMBERS	DESCRIPTION
DSK200	Valve "kick-out" (idéal pour fendeuse à bois) / Kick-out valve (ideal for wood splitter)
A2851	Levier de contrôle assemblé / Control lever assembly
19282A	Balle d'acier / Steel ball
19285A	Valve de dégagement à ressort / Relief Valve spring

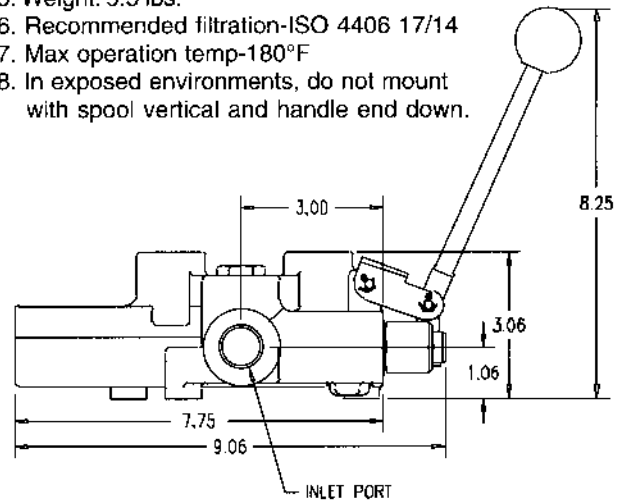
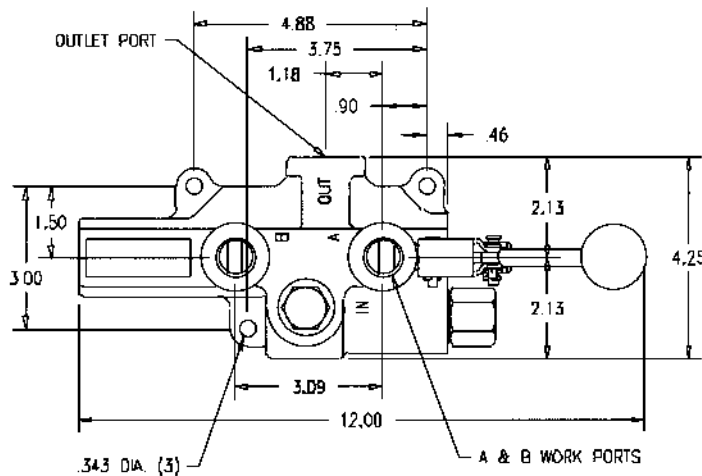
NUMÉRO NUMBER	DESCRIPTION	ILLUSTRATION
<p>300</p>	<p>Valve contrôle, pour simple action seulement. <i>Control valve, single acting only.</i></p> <p>FEATURES “Chrome plated spools smooth, positive and easy control fully balanced - self centering 4 mounting holes on bottom built-in relief valve (shim adjustable) easy mounting in any convenient location”</p>	 <p>GRESEN</p> <p>MODÈLE 300 (3 WAY) FOR SINGLE ACTING CYLINDERS (HAS LOAD CHECKS)</p> <p>Directional control valve</p> <p>SPÉCIFICATIONS : Capacité : 16 GPM Pression : 150-1500 PSI Pesanteur : 8-1/4 LBS</p>
<p>430H</p>	<p>Valve contrôle, circuit fermé, pour double action. <i>Control valve, closed center, double acting only.</i></p>	
<p>410</p>	<p>Valve contrôle, avec détente, pour double action. <i>Control valve, with detent, double acting only.</i></p>	
<p>440</p>	<p>Valve contrôle, “free flow”, pour opérer un moteur hydraulique. <i>Control valve, free flow, to operate an hydraulic motor.</i></p>	 <p>GRESEN</p> <p>MODÈLE 400 (4 WAY) FOR DOUBLE ACTING CYLINDERS (NO LOAD CHECKS)</p>

VALVE CONTRÔLE CONTROL VALVE



SPECIFICATIONS:

1. Max design and test pressure 3000 PSI
2. Max tank port pressure-150 PSI
3. Flow rating-20 GPM max.
4. Relief valve setting-1500 PSI
5. Weight: 9.5 lbs.
6. Recommended filtration-ISO 4406 17/14
7. Max operation temp-180°F
8. In exposed environments, do not mount with spool vertical and handle end down.

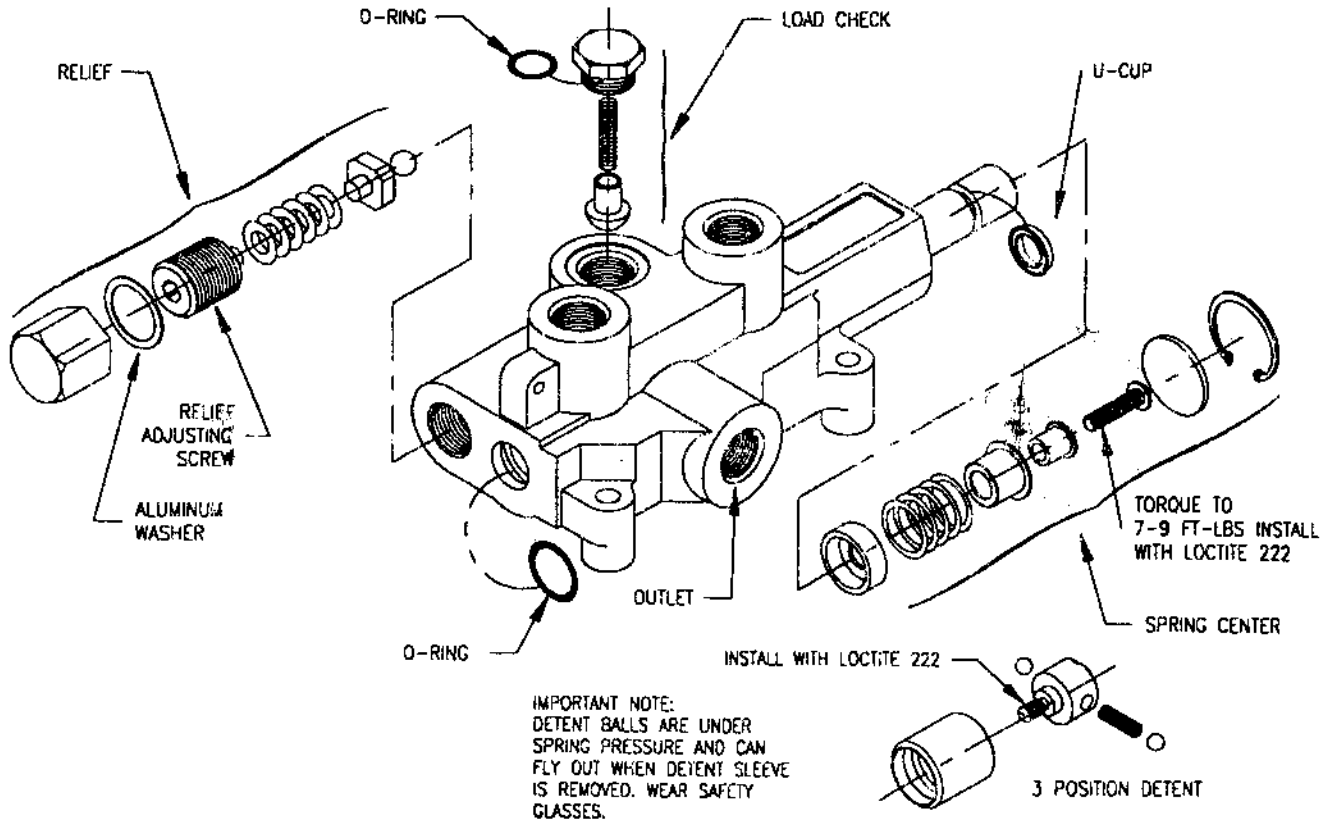


STANDARD FEATURES

- Economical monoblock construction of high tensile strength gray cast iron
- Load check
- Hard chrome plated spool
- Adjustable ball spring relief
- Open center to closed center conversion available on some models
- For use with system flows to 20 GPM
- For use with system pressures to 3000 PSI

NUMÉROS NUMBERS	DESCRIPTION
400MTI	Valve controle 4 ways, 3 positions 1/2" & 3/4" NPT Control valve 4 ways, 3 positions 1/2" & 3/4" NPT

VALVE CONTRÔLE
CONTROL VALVE



RELIEF VALVE
An adjustable ball spring relief valve is standard on all RD-2500 valves. The standard factory setting is 1500 psi @ 12 gpm and 120°F. Other settings can be specified.
The relief pressure is adjusted by removing acorn nut, and turning the adjusting screw. Turning the adjusting screw clockwise will increase the pressure and counterclockwise will decrease the pressure (a pressure gauge must be installed in the inlet line whenever the relief pressure is adjusted). Do not back out adjusting screw to the point it falls out.

WARNING: OVERPRESSURE MAY CAUSE SUDDEN AND UNEXPECTED FAILURE OF A COMPONENT IN THE HYDRAULIC SYSTEM RESULTING IN SERIOUS PERSONAL INJURY. ALWAYS USE A GAUGE WHEN ADJUSTING A RELIEF VALVE.

LOAD CHECK:
The load check feature is standard on most RD-2500 series valves. The load check will prevent the fall of a cylinder as the spool is shifted. It also prevents the backflow of oil from the work port to the inlet. The pump must build up enough pressure to overcome the pressure on the work port caused by the weight of the load before the cylinder can move.

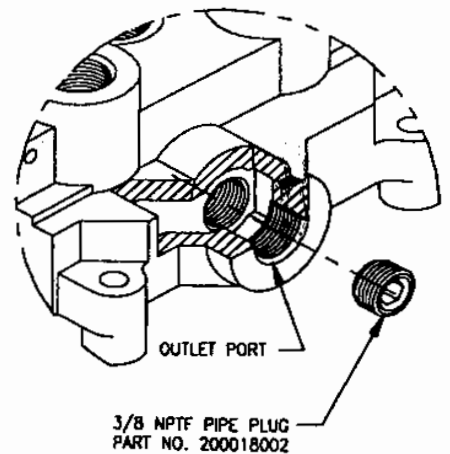
PLEASE NOTE: The load check has nothing to do with how well the valve will hold up a cylinder with the spool in neutral. The load check is functional only when the spool is shifted.

**OPEN CENTER TO CLOSED CENTER CONVERSION
RD2575 MODELS ONLY**

THIS FEATURE ALLOWS AN OTHERWISE OPEN CENTER VALVE TO BE CONVERTED TO CLOSED CENTER OPERATION. AS SHOWN AT RIGHT, A 3/8 NPTF PIPE PLUG IS INSTALLED IN THE BOTTOM OF THE OUTLET PORT TO BLOCK OPEN CENTER PASSAGE. A PIPE THREAD SEALANT SHOULD BE USED. THIS FEATURE IS STANDARD ON ALL VALVES WITH 3/4 NPTF INLET AND OUTLET PORTS. THE PIPE PLUG IS INCLUDED WITH THESE MODELS. DISCARD THE PIPE PLUG IF THE VALVE IS USED ON AN OPEN CENTER APPLICATION. PLEASE NOTE, IT MAY BE NECESSARY TO ADJUST RELIEF VALVE PRESSURE WHEN A PRESSURE COMPENSATED PUMP IS USED.

RD-2500 KITS AND CARTRIDGES

PART NO.	DESCRIPTION
660525001	RD-2500 SEAL KIT
660125001	3 POSITION DETENT KIT
660125004	RELIEF KIT
660150015	LOAD CHECK KIT
660125002	SPRING CENTER KIT
660130001	COMPLETE HANDLE KIT

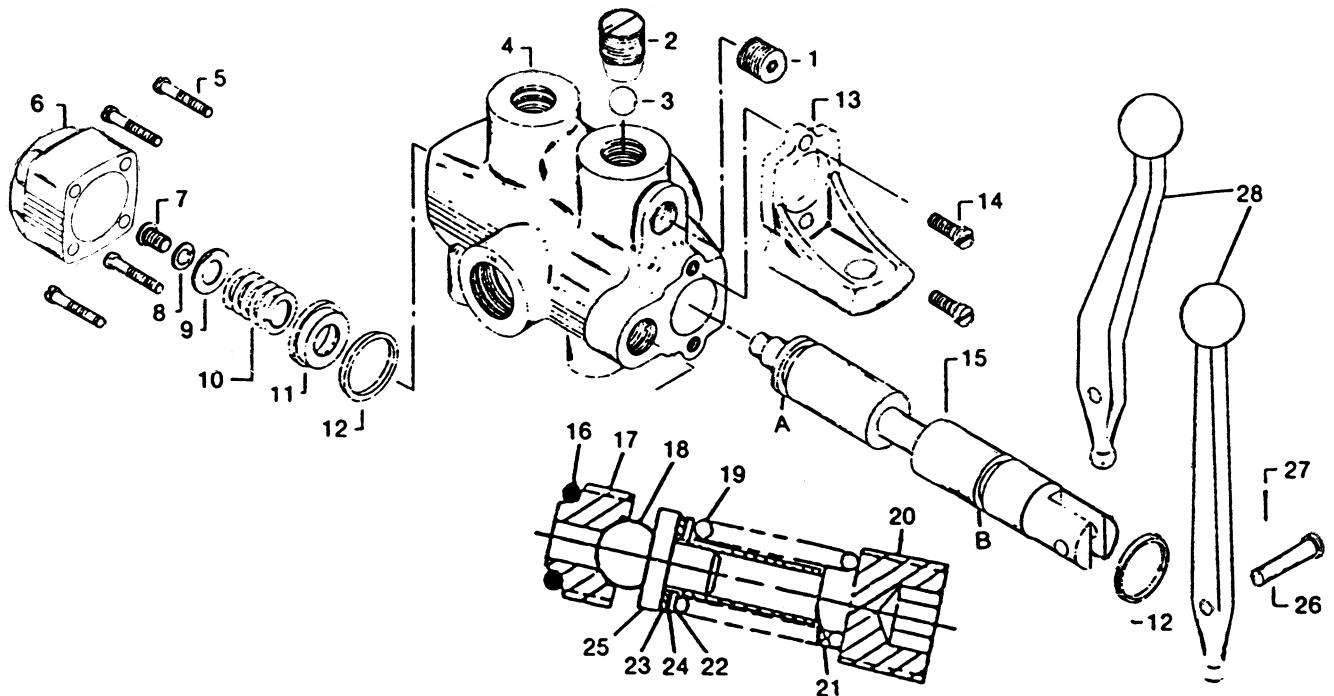


MODÈLE NO. 300 VALVE CONTRÔLE HYDRAULIQUE

MODEL NO. 300 HYDRAULIC CONTROL VALVE

Pièces pour réparer No. 300 (page 4)
With hardened replaceable relief valve seat

Liste de pièces / parts list



ITEM	PART NO.	DESCRIPTION	NO. REQD.	ITEM	PART NO.	DESCRIPTION	NO. REQD.
1	0017-001	By-pass plug	1	18	2504-001	Ball, high pressure, 1000-2500 PSI (69-172 bar), .375 inch (9,53 mm)	1
2	0585-001	Check plug	1		0155-001	Ball, low pressure, 200-999 PSI (13-69 bar), .344 inch (8,74 mm)	1
3	0963-001	Check ball, nylon	1	19	1450-001	Relief spring, high pressure, 1000-2500 PSI (69-172 bar)	1
4	0550-xxx	Valve housing	1		8378--001	Relief spring, low pressure, 200-999 PSI (13-69 bar)	1
5	0559-001	Bonnet screw, 8-32 x 1	4	20	0073-001	.375 NPT plug	1
6	0558-001	Bonnet	1	21	8086-001	Dampening sleeve	1
7	0510-001	Spring assembly screw 1/4-20	1	22	0459-001	Shim, .020 inch (0,51 mm)	A/R
8	0564-001	Assembly lock washer	1	23	0458-001	Shim, .040 inch (1,02 mm)	A/R
9	0509-001	Spring washer	1	24	0462-001	Shim, .010 inch (0,25 mm)	A/R
10	0557-001	Spring, standard	1	25	8087-001	Spring guide	1
	0591-001	Spring, medium, optional	1	26	0553-001	Handle pin	1
	0582-001	Spring, light, optional	1	27	0086-001	Cotter pin	1
11	0556-001	Spool collar	1	28	0552-001	Handle, black plastic coated, standard	1
12	0555-001	Spool seal	2		0552-002	Handle, red plastic coated, optional	1
13	0551-001	Handle bracket	1		0552-003	Handle, plain, optional	1
14	0562-001	Handle bracket screw	2		0565-001	Handle, offset, plain, optional	1
15	0554-001	Valve spool, 3-way standard	1				
16	2503-001	O-ring seal	1				
17	6382-001	Relief seat	1				

Housings and spools cannot be ordered as separate items.

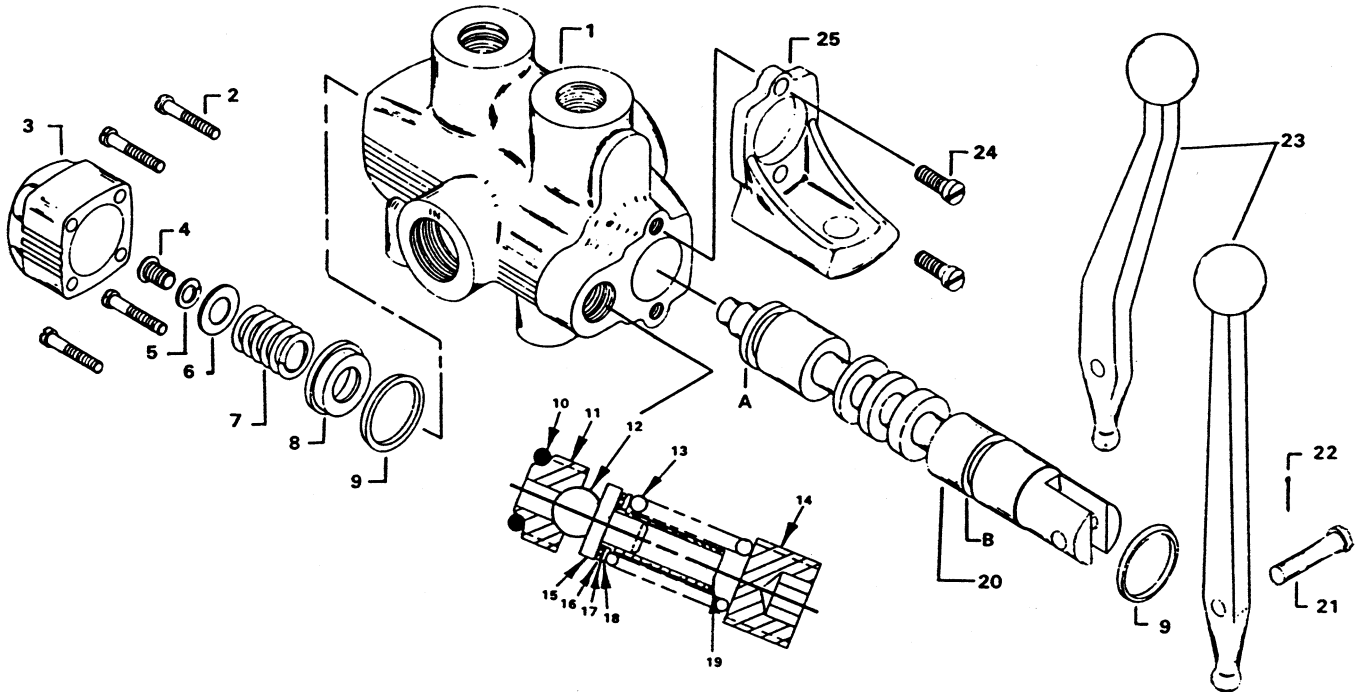
All spools are fitted to individual housings by select hone process at factory.

MODÈLE NO. 400 VALVE CONTRÔLE HYDRAULIQUE

MODEL NO. 400 HYDRAULIC CONTROL VALVE

Pièces pour réparer No. 400 (page 4)
 With hardened replaceable relief valve seat

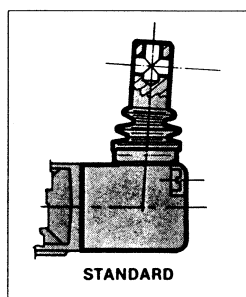
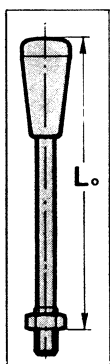
Liste de pièces / parts list



ITEM	PART NO.	DESCRIPTION	NO. REQD.	ITEM	PART NO.	DESCRIPTION	NO. REQD.
1	* 0575-xxx	Valve housing	1	13	1450-001	Relief spring, high pressure, 1000-2500 PSI (69-172 bar)	1
2	0559-001	Bonnet screws, 8-32 x 1"	4		8378-001	200-999 PSI (13-69 bar)	1
3	0558-001	Bonnet	1	14	0073-001	.375 NPTF plug	1
4	0510-001	Spring ass. screw 1/4-20 x 1/2	1	15	8087-001	Guide	1
5	0564-001	Lock washer	1	16	0458-001	Shim, .040 inch (1,02 mm)	A/R
6	0509-001	Flat washer	1	17	0462-001	Shim, .010 inch (0,25 mm)	A/R
7	0557-001	Centering spring, standard	1	18	0459-001	Shim, .020 inch (0,51 mm)	A/R
	0591-001	Centering spring, med. optional	1	19	8086-001	Dampening sleeve	1
	0582-001	Centering spring, light, optional	1	20	*0576-001	Valve spool, 4-way	1
8	0577-001	Stop collar	1	21	0553-001	Handle pin	1
9	0555-001	Spool seal	2	22	0086-001	Cotter pin	1
10	2503-001	O-Ring seal	1	23	0552-001	Handle, black plastic coated, standard	1
11	6382-001	Relief seat	1		0552-002	Handle, red plastic coated, optional	1
12	2504-001	Ball, high pressure, 1000-2500 PSI (69-172 bar) .375 inch (9,53 mm)	1		0552-003	Handle, plain, optional	1
	0155-001	Ball, low pressure, 200-999 PSI (13-69 bar), .344 inch (8,74 mm)	1		0565-001	Handle, offset, optional	1
				24	0562-001	Bracket screw	2
				25	0551-001	Handle bracket	1

* Housings and spools cannot be ordered as separate items.
 All spools are fitted to individual housings by select hone process at factory.

**VALVES CONTRÔLE 1-BRAS
1-SPOOL CONTROL VALVES**



CODE **L 100**

HDM 140

CARACTÉRISTIQUES TECHNIQUES :

Débit maximum : **40 L/min.**

Pression d'utilisation maximale : **320 bar**

Contrepression acceptable sur le retour : **30 bar**

Limiteur de pression réglable RV
(à la demande, pouvant être plombé)

Clapet anti-retour

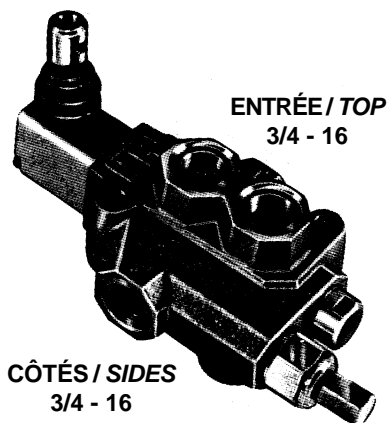
Recouvrement négatif du tiroir

Température d'huile conseillée : **min. - 10° C / max. 80° C**

Filtration conseillée de l'huile : **≤ 30 micron**

Fuite maximale à 100 bar
(Temp. : 50° C - Viscosité : 27 cst) : **18 ml/min.**

Poids : **1,75 Kg.**



Voir page 8 / See page 8

NUMÉROS NUMBERS	DESCRIPTION
HDM140G01	Valve contrôle, pour simple action seulement (pression 150 bar - 2100 PSI) <i>Control valve, single action only (pressure 150 bar - 2100 PSI)</i>
HDM140A01	Valve contrôle, pour double action seulement (pression 150 bar - 2100 PSI) <i>Control valve, double action only (pressure 150 bar - 2100 PSI)</i>

TECHNICAL SPECIFICATIONS :

Max. capacity : **40 L/min.**

Max. allowable pressure : **4500 P.S.I.**

Back pressure allowable on the return line : **420 P.S.I.**

Adjustable pressure limited : **RV**

Single check valve

Recommended oil temp : **min. - 10° C / max. 80° C**

Recommended oil filtration : **30 micron**

(Temp. : 50° C - Viscosité : 27 cst) : **18 ml/min.**

Weight : **1,75 Kg.**

DIMENSIONS D'ENCOMBREMENT

CODE	Ø D			
	P	T	A	B
KO1 STANDARD	M18 x 1,5	M18 x 1,5	M18 x 1,5	M18 x 1,5
KO2	3/8" - BSP	3/8" - BSP	3/8" - BSP	3/8" - BSP
KO3	3/8" - 18 NPT	3/8" - 18 NPT	3/8" - 18 NPT	3/8" - 18 NPT
KO4	SAE 8	SAE 8	SAE 6	SAE 6
KO5	SAE 8	SAE 8	SAE 8	SAE 8

* Voir les dimensions des positionneurs

** Couple de serrage max.: 3 Kgm

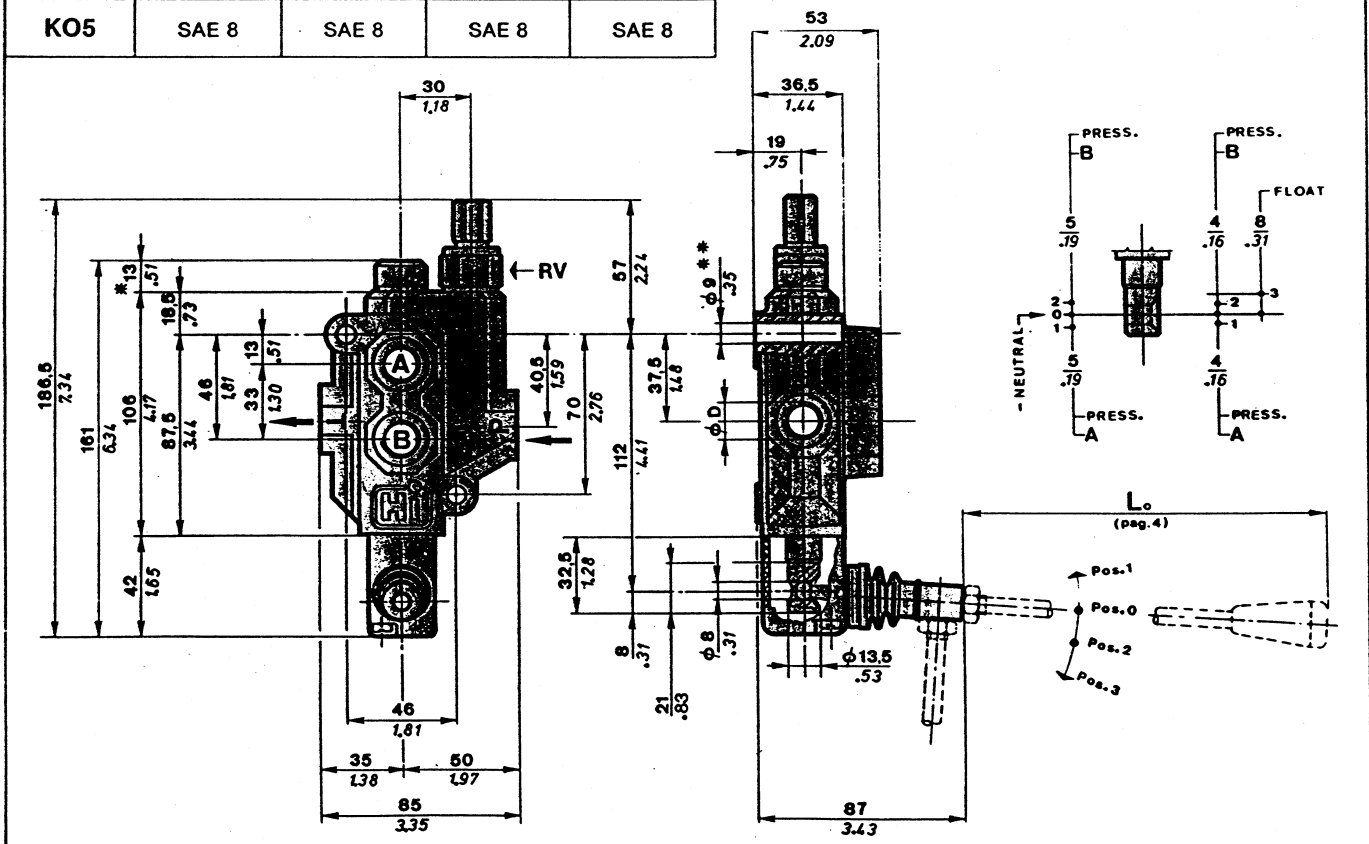
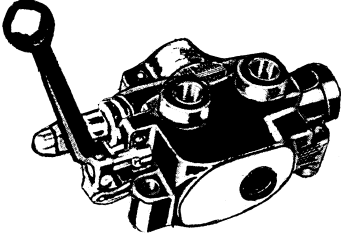
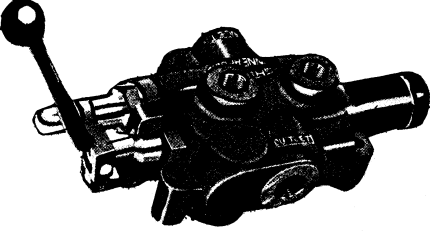
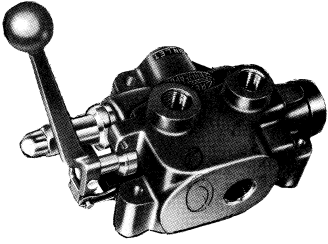
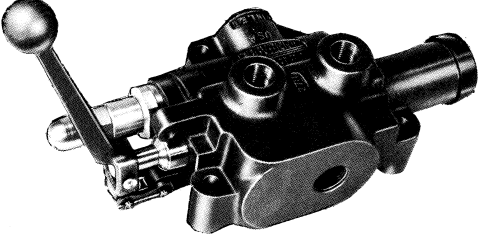
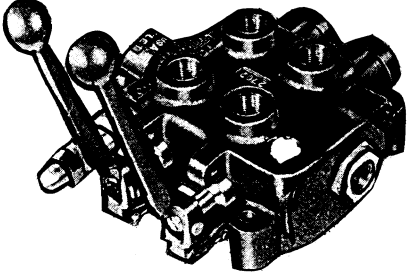
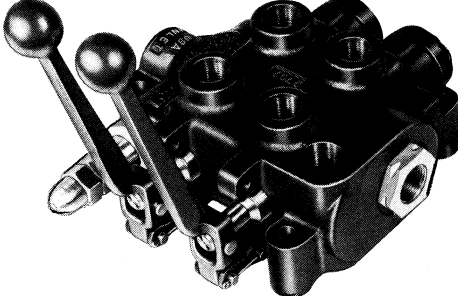
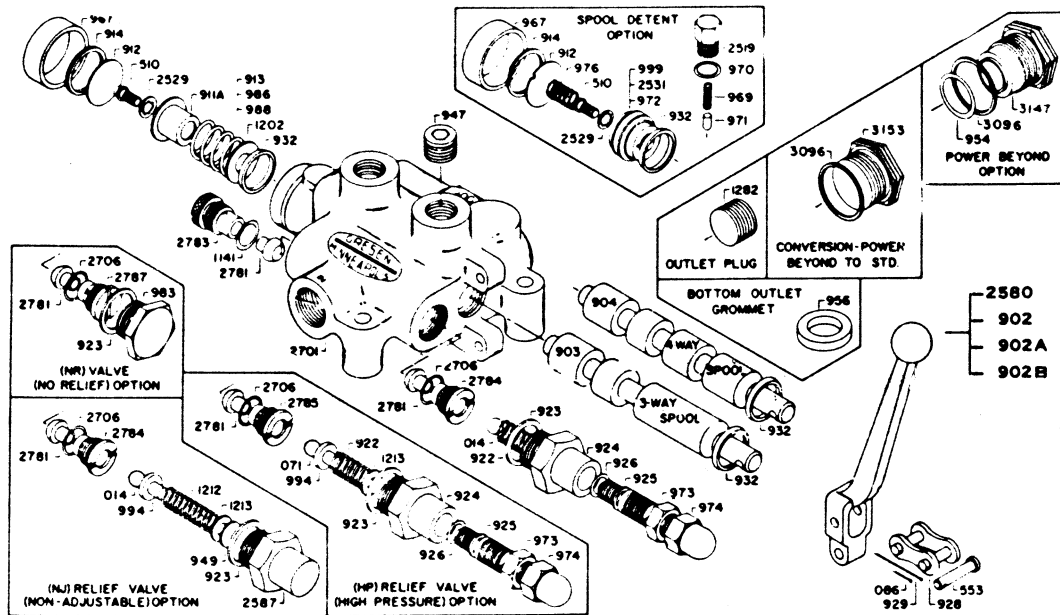


ILLUSTRATION	NUMÉRO NUMBER	DESCRIPTION
<p><i>Directional Control Valve</i></p> <p>PARALLEL CIRCUIT</p> <p>Capacité jusqu'à 20 GPM Pression maximum 2000 PSI</p> <p><i>Capacity up to 20 GPM (75,70 liters/min)</i> <i>Maximum pressure 2000 PSI (138,0 bar)</i></p> 	<p>SP3 action cylinders</p> <p>SP4 action cylinders</p>	<p>MODÈLE SP GRESEN 1-BRAS STANDARD / 1-SPOOL STANDARD</p> <p>Valve contrôle, 1-bras pour opérer cylindres simple action <i>Control valve, 1-spool, to operate single acting</i></p> <p>Valve contrôle, 1-bras pour opérer cylindres double action <i>Control valve, 1-spool, to operate double acting</i></p>
	<p>SPK4 action poussé cylinders</p>	<p>1-BRAS - POSITION FLOTTANTE / 1-SPOOL - FLOAT POSITION</p> <p>Valve contrôle, 1-bras pour opérer cylindres double plus une position flottante lorsque le bras est complètement. <i>Control valve, 1-spool, to operate double acting plus 1-float position.</i></p>
	<p>SPXTE4HP qui</p>	<p>MODÈLE SPXTE GRESEN 1-BRAS TRANSFORMABLE 1-SPOOL TRANSFORMABLE</p> <p>Valve contrôle, 1-bras, double action, régulière mais peut être transformé de plusieurs façons. (Voir page 21 pour OPTIONS)</p> <p><i>Control valve, 1-spool, double acting, regular, but can be modified in many ways.</i> <i>(See page 21 pour OPTIONS)</i></p>
	<p>SPKXTE4HP</p>	<p>MODÈLE SPKXTE GRESEN 1-BRAS / 1-SPOOL TRANSFORMABLE + POSITION FLOTTANTE TRANSFORMABLE + FLOAT POSITION</p> <p>Valve contrôle, 1-bras double action transformable Transformable et position flottante. (Voir page 21 pour OPTIONS)</p> <p><i>Control valve, 1-spool, double acting Transformable and float position.</i> <i>(See page 21 pour OPTIONS)</i></p>

NUMÉRO NUMBER	DESCRIPTION	ILLUSTRATION
<p>SP4-4</p>	<p>MODÈLE SP GRESEN 2-BRAS STANDARD / 2-SPOOL STANDARD</p> <p>Valve contrôle, 2-bras, double action, standard <i>Control valve, 2-spool, double acting, standard</i></p>	<p><i>Directional Control Valve</i></p> <p>PARALLELEL CIRCUIT</p> <p>Capacité jusqu'à 20 GPM Pression maximum 2000 PSI</p> <p><i>Capacity up to 20 GPM (75,70 liters/min)</i></p> 
<p>SPXTE4-3HP</p> <p>SPXTE4-4HP</p>	<p>MODÈLE SPXTE GRESEN 2-BRAS TRANSFORMABLE 2-SPOOL TRANSFORMABLE</p> <p>Cette valve est au départ "régulière" mais elle peut faire plusieurs choses :</p> <ol style="list-style-type: none"> 1.Elle a un "relief" à haute pression. 2.Elle a une sortie sur le dessus. 3.Elle a une sortie sur le côté. 4.Elle peut faire une "power beyond". 5.Elle peut faire un "circuit fermé". 6.Elle peut faire une valve "NR" sans relief. <p><i>This valve is regular but can be modified into many models :</i></p> <ol style="list-style-type: none"> 1.It has a high pressure relief. 2.It has a outlet on the top. 3.It has a outlet on the side. 4.It can be a power beyond. 5.It can be a closed center. 6.It can be a non relief "NR". <p>Valve contrôle, 1-bras simple, 1-bras double. <i>Control valve, 1-spool single, 1-spool double.</i></p> <p>Valve contrôle, 2-bras, double action. <i>Control valve, 2-spool, double acting.</i></p>	<p><i>Directional Control Valve</i></p> <p>PARALLELEL CIRCUIT</p> <p>Capacité jusqu'à 20 GPM Pression maximum 2000 PSI</p> <p><i>Capacity up to 20 GPM (75,70 liters/min)</i></p>  <p>Voir page 21 pour OPTIONS</p>

SP (1 SPOOL)



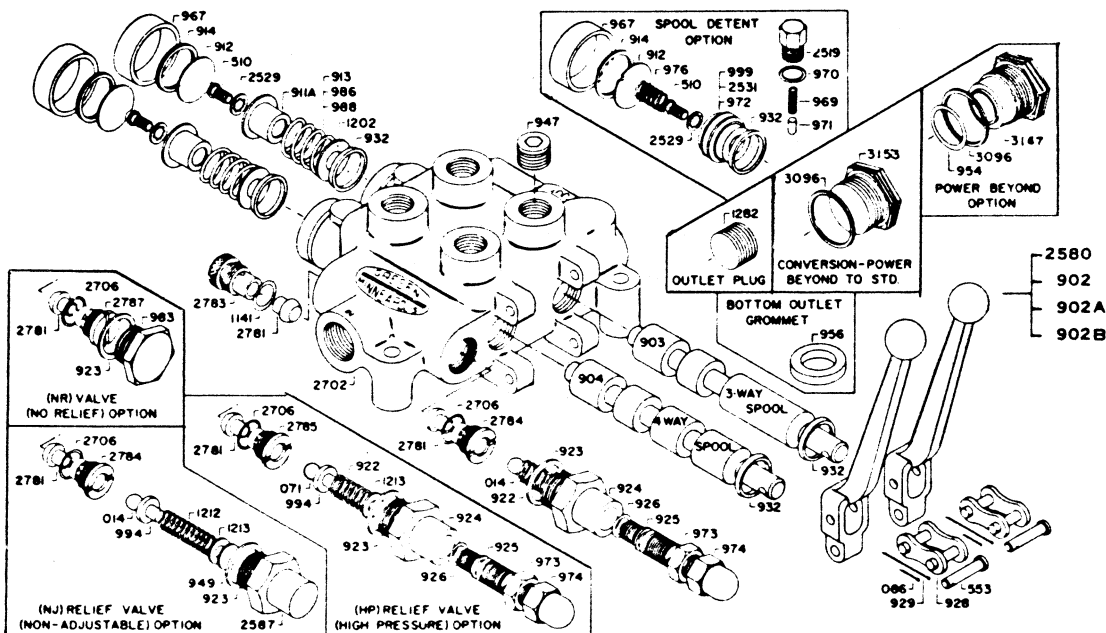
- Note :**
1. Voir au verso pour la description des pièces /
See reverse side for parts description
 2. Pour les pièces optionnelles SPÉCIALES, voir la deuxième colonne au verso
(No. Req'd." est le même pour tous les modèles) /
For SPECIAL Optional Parts, see 2nd column on reverse side.
(“No. Req'd.” is the same for all models.)

Part No.	No. Req'd
014	1
086	1
510	1
553	1
902	
902-A	
902-B	
* 903	{ 1
* 904	
911-A	1
912	1
913	1
914	1
922	1
923	1
924	1
925	1
926	1
928	1
929	1
932	2
947	
953	
967	1
973	1
974	1
986	
988	
1141	1
1202	1
2529	1
* 2580	1
2701	1
2706	1
2781	2

SP (2 SPOOL)

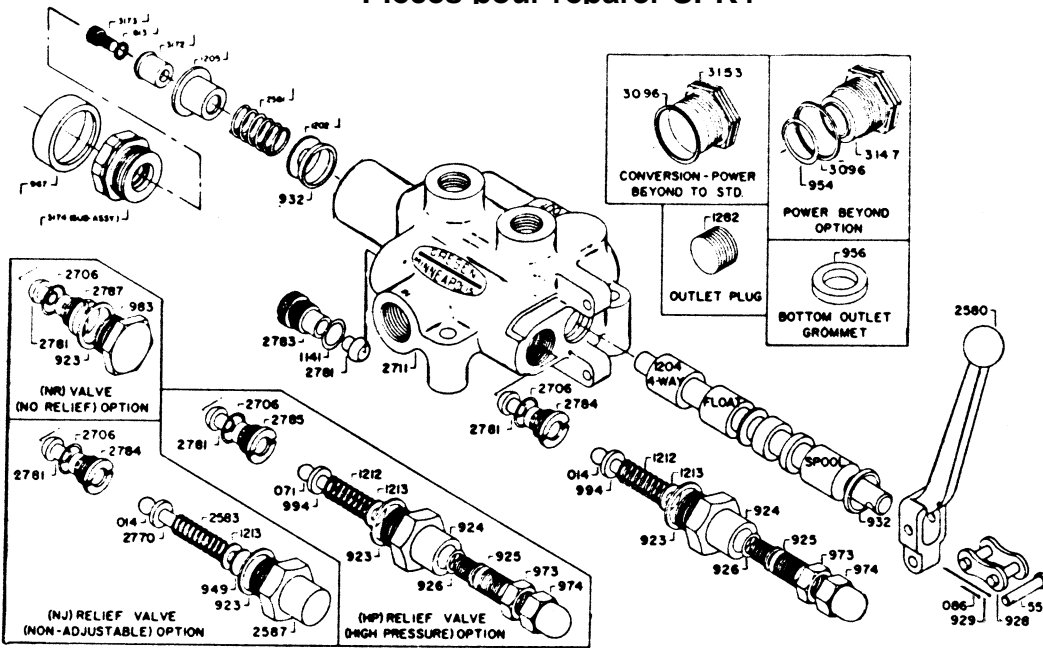
Pièces pour réparer :

SP3-4, SP4-4, SPCE3-4, SPCE4-4, SPYE3-4, SPYE4-4



Part No.	No. Req'd
014	1
086	2
510	2
553	2
902	
902-A	
902-B	
* 903	{ 2
* 904	
911-A	2
912	2
913	2
914	2
922	1
923	1
924	1
925	1
926	1
928	2
929	2
932	4
947	
953	
967	2
973	1
974	1
986	
988	
1141	1
1202	2
2529	2
2580	2
2702	1
* 2706	1
2781	2
2783	1
2784	1

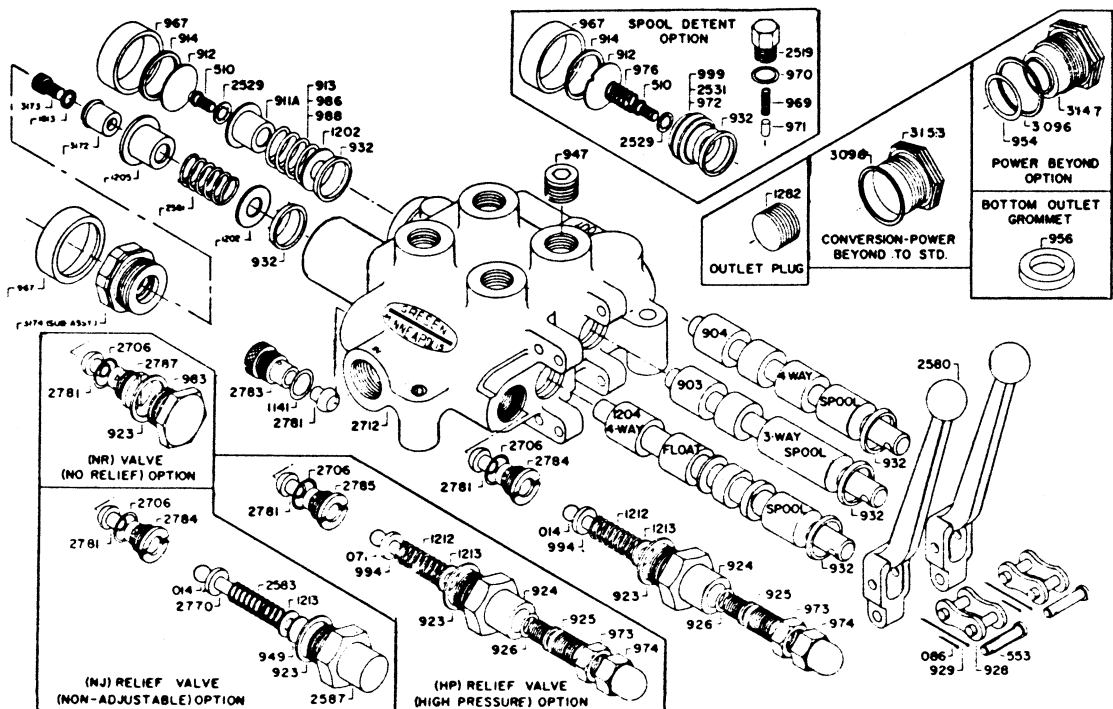
SPK (1 SPOOL) CONTROL VALVE W/FLOAT Pièces pour réparer SPK4



Part No.	No. Req'd
014	1
086	1
553	1
923	1
924	1
925	1
926	1
928	1
929	1
932	2
952	1
967	1
973	1
974	1
986	1
988	1
994	1
1141	1
1202	1
* 1204	1
1205	1
1206	1
1207	1
1208	3
1209	1
1210	1
1211	1
1212	1
1213	As Req'd
1214	1
1215	1
2580	1
2581	1
2686	1
2706	1
* 2711	1
2781	2
2783	1
2784	1

Part No.	No. Req'd
014	1
086	2
510	1
553	2
* 903	}
* 904	
911-A	1
912	1
913	1
914	1
923	1
924	1
925	1
926	1
928	2
929	2
932	4
947	1
952	1
967	2
973	1
974	1
986	1
988	1
994	1
1141	1
1202	2
* 1204	1
1205	1
1206	1
1207	1
1208	3
1209	1
1210	1
1211	1
1212	1
1213	As Req'd
1214	1
1215	1
2529	1
2580	2
2581	1
2686	1
2706	1
* 2712	1
2781	2
2783	1
2784	1

SPK (2 SPOOL) CONTROL VALVE W/FLOAT Pièces pour réparer SPK3-4, SP4-4



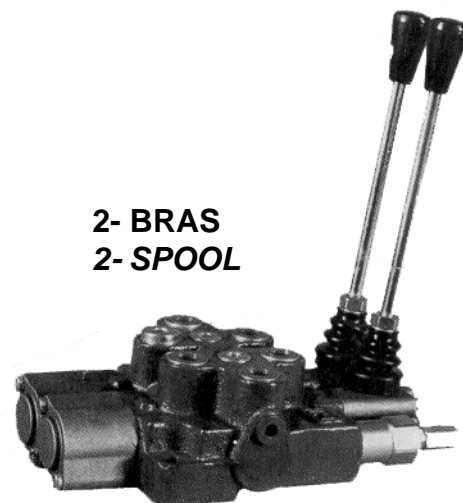
HIDROIRMA

VALVES CONTRÔLE CONTROL VALVES

1- BRAS
1- SPOOL



2- BRAS
2- SPOOL



Toutes les sorties : 9/16 - 18

All ports : 9/16 - 18

DONNÉES TECHNIQUES :

- Pression max. d'exercice : 320 bar
- Contrepression acceptable sur le retour : 100 bar
- Débit max. : 60 lt/min
- Réseau en parallèle
- Recouvrement négatif du tiroir
- Soupape de sécurité réglable
(scellé avec plomb sur demande)
- Clapet de non retour pour chaque élément
- Température d'huile conseillée : -10° C + 80° C
- Viscosité de l'huile : 60 u (pore moyen) jusqu'à 100 bar et 45 u pour pression supérieure.

SPECIFICATIONS :

- Max. operating pressure : 4500 P.S.I.
- Back allowable pressure : 1400 P.S.I.
- Max flow : 13 imp G.P.M. - 16 U.S. G.P.M.
- Parallel connected
- Negative overlapping of the spool
- Adjustable max pressure relief valve
(lead sealed upon demand)
- Check valve on each working section
- Oil temperature : - 10° C (140° F) + 80° C (176° F)
- Suggested oil viscosity : min 1, 5° E max. 25° E
- We suggest oil filtering : 60 u (medium size pore) up to 1400 P.S.I. and 45 u for high pressure.

Voir page 14 / See page 14

NUMÉROS NUMBERS	DESCRIPTION
HDM251K30	Valve contrôle, 1-bras, pour opérer cylindre double action (Pression max : 400 bar) (25 Gallons) <i>Control valve, 1-spool, to operate double acting cylinder (Max. pressure : 5700 P.S.I.) (25 Gallons)</i>
HDM102K36A01A01	Valve contrôle, 2-bras, pour opérer cylindre double action (Pression max. : 320 bar) (10 Gallons) <i>Control valve, 2-spool, to operate double acting cylinder (Max. pressure : 4500 P.S.I.) (10 Gallons)</i>
HDM112K02AA01L100	Valve contrôle, 2 bras, pour opérer cylindre double action <i>Control valve, 2-spool, to operate double acting cylinder</i>
HDM112K02ZA01L100	Valve 2 bras, (1-position flottante) <i>Valve 2 spools, (1-float)</i>
HDM102K41	Valve contrôle, 2-bras, pour opérer cylindre double action (10 Gallons, Position flottante) <i>Control valve, 2-spool, to operate double acting cylinder (10 Gallons, Float position)</i>
917245181	Manette pour opérer HDM102K41 <i>Dual axis joystick to operate HDM102K41</i>

HIDROIRMA

MONOBLOCK DIRECTIONAL CONTROL VALVE

HDM25

WEGEVENTIL IN MONOBLOCK-AUSFÜHRUNG

HDM25/1

HDM25/2/3/4

T1 H.P.O.
1.5/16" - 12 (SAE 16)

M10x1.5

Pos.3
Pos.1
Pos.2

Ø17.5
.69" DIA

Ø10
.39" DIA

Ø11
.43" DIA

90
3.62"

25
.98"

37
1.46"

46
1.81"

80
3.15"

Ø D

P1

RV

124
4.88"

37.5
1.48"

37.5
1.48"

47
1.85"

100
3.94"

140
5.51"

252
9.92"

62
2.44"

62
2.44"

32.5
1.28"

32.5
1.28"

62
2.44"

37.5
1.48"

37.5
1.48"

40
1.57"

62
2.44"

62
2.44"

Ø D

P1

RV

Pos.2 STROKE - Hub 7 mm - .28"

Pos.1 STROKE - Hub 7 mm - .28"

Pos.3 STROKE - Hub 12 mm - .47"

FLOAT

PRESS B

PRESS A

Pos.2 STROKE - Hub 7.5 mm - .30"

Pos.1 STROKE - Hub 7.5 mm - .30"

PRESS B

PRESS A

* For positioner dimensions see page 7

* Für Abmessungen der Schallvorrichtungen siehe S. 7

TYPE TYP	HDM25/2	HDM25/3	HDM25/4
Dimension A Abmessung A	115 4.53"	155 6.11"	195 7.69"
Dimension B Abmessung B	164 6.64"	204 8.04"	244 9.62"

GENERAL SPECIFICATION

Number of spools _____ 1 to 4
 Max. Flow rate _____ 25 U.S.G.P.M.
 Max. operating pressure _____ 5700 PSI
 Max. back pressure _____ 400 PSI
 Parallel circuit (serie or tandem on demand)

Adjustable direct acting relief valve
 (Tamper-proof seal available on request) _____ RV

Load hold check valve in each section _____ LC
 Cartridge anti-shock, anti-cavitation
 and service relief available _____ 0A-UC-C

Spool leakage at 1450 PSI Temp.120°F. Viscosity 27 cst:
 Maximum: _____ 0.854 Cu. in./min.
 Middle: _____ 0.427 Cu. in./min.
 Lower values on demand (to be agreed with our Sales Dpt.)
 Oil temperature: _____ min 14°F
 _____ max. 180° F
 Oil viscosity: _____ 16 to 75 cst
 Oil filtering: _____ <30 µ

Weight:
 HDM 25/1 _____ 13 Lbs.
 HDM 25/2 _____ 19.8 Lbs.
 HDM 25/3 _____ 26.9 Lbs.
 HDM 25/4 _____ 33.7 Lbs.

Material Specification
 Body: High strength cast-iron
 Spool: Hardened steel - Chrome plated
 Seal: Buna 'N'

Standard Features

- 1) Internal load holding check valves (prevent reverse flow through valve when two spools are operated)
- 2) Parallel circuit
- 3) Balanced interchangeable spools (provides minimum leakage, smooth operation)
- 4) Wide selections of inlets, work ports, and outlet threaded connections
- 5) Negative overlapping of the spools

Optional features available

- 1) Open or closed centre positions, 3-way or 4-way operations, 3-positions or 4-positions (float position), full open center (motoring spool) and other spool options.
- 2) Carry-over
- 3) Series connection and tandem
- 4) Complete lever assembly.

Symbols
 P: top inlet - T: top outlet - A/B: work ports - RV: relief valve
 P1/T1: side inlet and outlet - H.P.C.: carry over (power beyond) - 3.10.2: spool position - P: pressure line
 T: exhaust line - E: center line (by pass) -

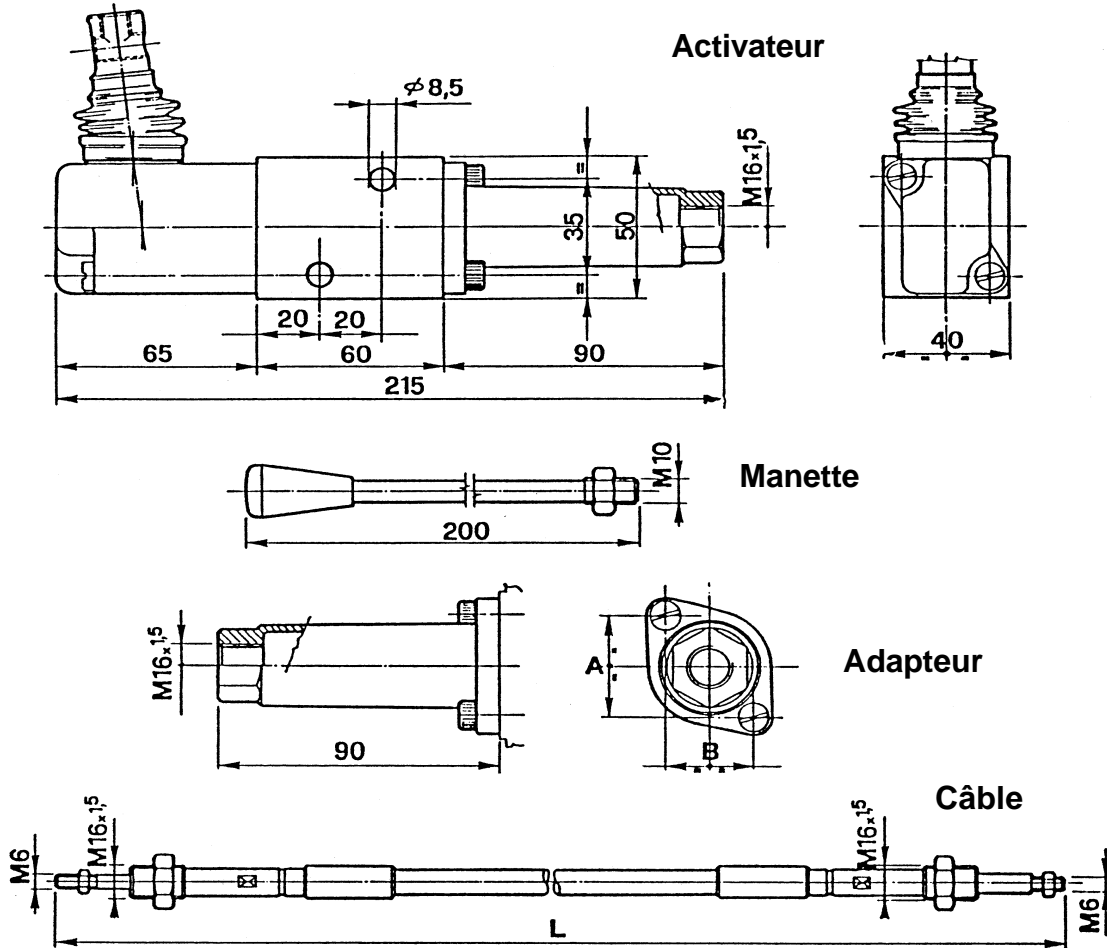
Dimensional data shown in (mm) and (inches).

**ENTRÉE ET SORTIE (3/4 ORB) IN - OUT
 DESSUS (5/8 ORB) TOP**

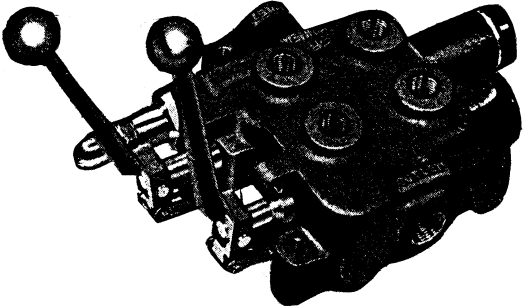
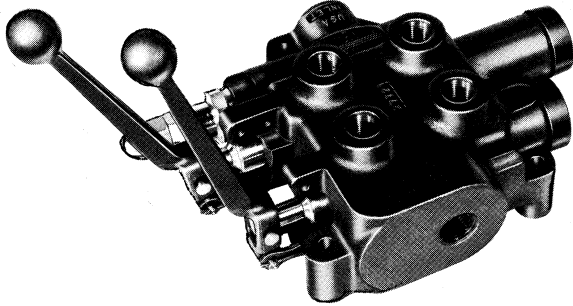
FEATURES		TECHNISCHE DATEN	
Number of spools _____	1 to 4	Anzahl der Schieber _____	1 - 4
Max. flow rate _____	25 U.S.G.P.M.	Max. Durchflussmenge _____	100 l/min
Max. operating pressure _____	5700 PSI	Max. Betriebsdruck _____	400 bar
Max. back pressure _____	400 PSI	Max. Gegendruck _____	30 bar



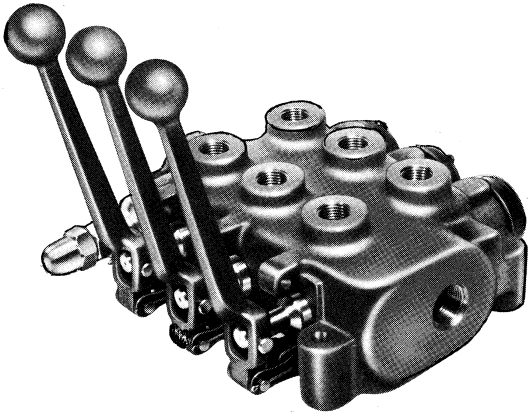
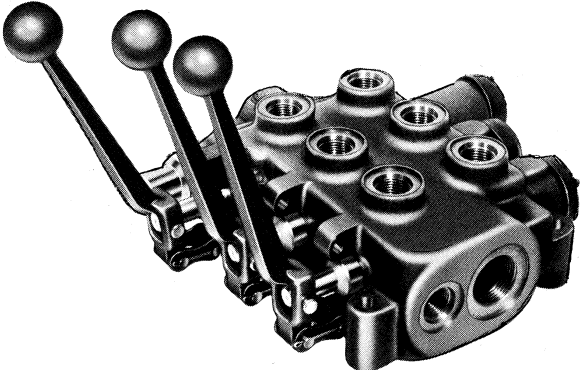
ACCESSOIRES POUR VALVES
ACCESSORIES FOR VALVES



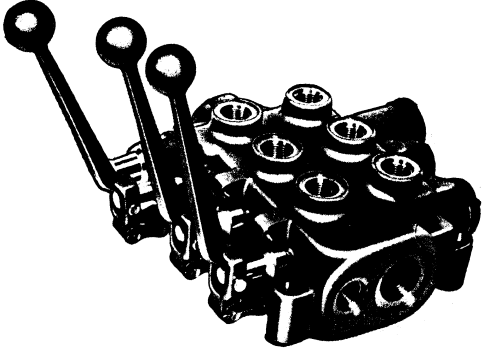
NUMÉROS NUMBERS	DESCRIPTION	
917700106	Adapteur pour HDM11	Valve adaptor for HDM11
922132690	Activateur	Actuator
912205613	Manette pour HDM140	Handle for HDM140
912205613-160	Manette pour HD160	Handle for HD160
917700104	Adapteur (25 x 18)	Valve adaptor
912700102	Adapteur (35 x 28.6)	Valve adaptor
922700101	Adapteur (32 x 32)	Valve adaptor
801104821	Câble 1 mètre	Cable 1 meter
801104822	Câble 1.5 mètre	Cable 1.5 meter
801104820	Câble 2 mètres	Cable 2 meters
801104823	Câble 2.5 mètres	Cable 2.5 meters
801104824	Câble 3 mètres	Cable 3 meters
801104826	Câble 4 mètres	Cable 4 meters
120.6059.04	Protecteur en caoutchouc pour HDM10	Rubber protector for HDM10
170.6059.05	Protecteur en caoutchouc pour HDM120	Rubber protector for HDM120

ILLUSTRATION	NUMÉRO NUMBER	DESCRIPTION
<p><i>Directional Control Valve</i></p> <p>PARALLEL CIRCUIT</p> <p>Capacité jusqu'à 20 GPM Pression maximum 2000 PSI</p> <p><i>Capacity up to 20 GPM (75,70 liters/min)</i> <i>Maximum pressure 2000 PSI (138,0 bar)</i></p> 	<p>SPK4-4</p>	<p>MODÈLE SPK GRESEN 2-BRAS, 1 POSITION FLOTTANTE 2-SPOOL, 1 FLOAT POSITION</p> <p>Valve contrôle, 2-bras 1-bras, double action, régulier 1-bras, double action avec position flottante</p> <p><i>Control valve, 2-spool</i> <i>1-spool, double acting, regular</i> <i>1-spool, double acting with float position</i></p>
<p><i>Directional Control Valve</i></p> <p>PARALLEL CIRCUIT</p> <p>Capacité jusqu'à 20 GPM Pression maximum 2000 PSI</p> <p><i>Capacity up to 20 GPM (75,70 liters/min)</i> <i>Maximum pressure 2000 PSI (138,0 bar)</i></p> 	<p>SPKXTE4-4HP</p>	<p>MODÈLE SPKXTE GRESEN 2-BRAS, TRANSFORMABLE 1 POSITION FLOTTANTE 2-SPOOL, TRANSFORMABLE, 1 FLOAT POSITION</p> <p>Valve contrôle, 2-bras, transformable, avec : 1-bras, double action, régulier 1-bras, double action avec position flottante</p> <p><i>Control valve, 2-spool, transformable, with :</i> <i>1-spool, double acting, regular</i> <i>1-spool, double acting with float position</i></p>

Voir page 21 pour OPTIONS / See page 21 for OPTIONS

ILLUSTRATION	NUMÉRO NUMBER	DESCRIPTION
<p><i>Directional Control Valve</i></p> <p>PARALLELEL CIRCUIT</p> <p>Capacité jusqu'à 20 GPM Pression maximum 2000 PSI</p> <p><i>Capacity up to 20 GPM (75,70 liters/min) Maximum pressure 2000 PSI (138,0 bar)</i></p> 	<p>SP4-4-4</p>	<p>MODÈLE SP GRESEN 3-BRAS STANDARD 3-SPOOL STANDARD</p> <p>Valve contrôle, 3-bras, les 3 bras sont double action</p> <p><i>Control valve, 3-spool, the three spools are double acting</i></p>
<p><i>Directional Control Valve</i></p> <p>PARALLELEL CIRCUIT</p> <p>Capacité jusqu'à 20 GPM Pression maximum 2000 PSI</p> <p><i>Capacity up to 20 GPM (75,70 liters/min) Maximum pressure 2000 PSI (138,0 bar)</i></p> 	<p>SPKXTE4-4-4HP</p>	<p>MODÈLE SPKXTE GRESEN 3-BRAS, TRANSFORMABLE, 1 POSITION FLOTTANTE 3-SPOOL, TRANSFORMABLE, 1 FLOAT POSITION</p> <p>Valve contrôle, 3-bras, transformable, avec : 2-bras, double action, régulier 1-bras, double action avec position flottante</p> <p><i>Control valve, 3-spool, transformable, with : 2-spool, double acting, regular 1-spool, double acting with float position</i></p>

Voir page 21 pour OPTIONS / See page 21 for OPTIONS

ILLUSTRATION	NUMÉRO NUMBER	DESCRIPTION
<p style="text-align: center;"><i>Directional Control Valve</i></p> <p style="text-align: center;">PARALLEL CIRCUIT</p> <p style="text-align: center;">Capacité jusqu'à 20 GPM Pression maximum 2000 PSI</p> <p style="text-align: center;"><i>Capacity up to 20 GPM (75,70 liters/min)</i> <i>Maximum pressure 2000 PSI (138,0 bar)</i></p> 	<p style="text-align: center;">MODÈLE SPXTE GRESEN 3-BRAS STANDARD TRANSFORMABLE 3-SPOOL STANDARD TRANSFORMABLE</p> <p>Cette valve est au départ "régulière" mais elle peut faire plusieurs choses :</p> <ol style="list-style-type: none"> 1. Elle a un "relief" à haute pression. 2. Elle a une sortie sur le dessus. 3. Elle a une sortie sur le côté. 4. Elle peut faire une "power beyond". 5. Elle peut faire un "circuit fermé". 6. Elle peut faire une valve "NR" sans relief. <p><i>This valve is regular but can be modified into many models :</i></p> <ol style="list-style-type: none"> 1. <i>It has a high pressure relief.</i> 2. <i>It has a outlet on the top.</i> 3. <i>It has a outlet on the side.</i> 4. <i>It can be a power beyond.</i> 5. <i>It can be a closed center.</i> 6. <i>It can be a non relief "NR".</i> <p>SPXTE3-4-4HP Valve contrôle, transformable, 1-bras simple, 2-bras double. <i>Control valve, transformable 1-spool single, 2-spool double.</i></p> <p>SPXTE4-4-4HP Valve contrôle, transformable, 3-bras double action. <i>Control valve, transformable, 3-spool double acting.</i></p>	

Voir page 21 pour OPTIONS / See page 21 for OPTIONS

**CETTE PAGE CONTIENT LES INFORMATIONS NÉCESSAIRES
POUR TRANSFORMER DES VALVES.**

THIS PAGE CONTAINS THE ESSENTIEL INFORMATIONS TO MODIFY VALVE.

POUR FAIRE 1-VALVE "POWER BEYOND" TO MODIFY A VALVE INTO A "POWER BEYOND"	
<p>Valve contrôle 2-BRAS Control valve 2-SPOOL</p> <p>1-simple action, 1-double action <i>1-single acting, 1-double acting</i></p> <p>2-double action <i>2-double acting</i></p>	<p>IL VOUS FAUT : YOU NEED :</p> <p>1-SPXTE3-4HP * 1-K-SP75Y</p> <p>1-SPXTE4-4-HP * 1-K-SP75Y</p>
<p>Valve contrôle 3-BRAS Control valve 3-SPOOL</p> <p>1-simple action, 2-double action <i>1-single acting, 2-double acting</i></p> <p>3-double action <i>3-double acting</i></p>	<p>IL VOUS FAUT : YOU NEED :</p> <p>1-SPXTE3-4-4HP * 1-K-SP75Y</p> <p>1-SPXTE4-4-4HP * 1-K-SP75Y</p>

POUR FAIRE 1-VALVE "POSITION FLOTTANTE" + "POWER BEYOND" TO MODIFY A VALVE INTO A "FLOAT POSITION" + "POWER BEYOND"	
<p>Valve contrôle 2-BRAS Control valve 2-SPOOL</p> <p>2-double action <i>2-double acting</i></p>	<p>IL VOUS FAUT : YOU NEED :</p> <p>1-SPKXTE4-4HP * 1-K-SP75Y</p>
<p>Valve contrôle 3-BRAS Control valve 3-SPOOL</p> <p>3-double action <i>3-double acting</i></p>	<p>IL VOUS FAUT : YOU NEED :</p> <p>1-SPKXTE4-4-4HP * 1-K-SP75Y</p>

* Voir page 21 pour OPTIONS / See page 21 for OPTIONS

**CETTE PAGE CONTIENT LES INFORMATIONS NÉCESSAIRES
POUR TRANSFORMER DES VALVES.**

THIS PAGE CONTAINS THE ESSENTIAL INFORMATIONS TO MODIFY VALVE.

POUR FAIRE 1-VALVE "CIRCUIT FERMÉ" TO MODIFY A VALVE INTO A "CLOSED CENTER"	
<p>Valve contrôle 2-BRAS Control valve 2-SPOOL</p> <p>1-simple action, 1-double action <i>1-single acting, 1-double acting</i></p> <p>2-double action <i>2-double acting</i></p> <p>SANS "RELIEF" WITHOUT "RELIEF"</p> <p>1-simple action, 1-double action <i>1-single acting, 1-double acting</i></p> <p>2-double action <i>2-double acting</i></p> <p>Valve contrôle 3-BRAS Control valve 3-SPOOL</p> <p>1-simple action, 2-double action <i>1-single acting, 2-double acting</i></p> <p>3-double action <i>3-double acting</i></p> <p>SANS "RELIEF" WITHOUT "RELIEF"</p> <p>1-simple action, 2-double action <i>1-single acting, 2-double acting</i></p> <p>3-double action <i>3-double acting</i></p>	<p>IL VOUS FAUT : YOU NEED :</p> <p>1-SPXTE-4-3HP ‡-K-SP-C</p> <p>1-SPXTE-4-4HP ‡-K-SP-C</p> <p>IL VOUS FAUT : YOU NEED :</p> <p>1-SPXTE-4-3HP ‡-K-SP-C ‡-K-SP-NR</p> <p>1-SPXTE-4-4HP ‡-K-SP-C ‡-K-SP-NR</p> <p>IL VOUS FAUT : YOU NEED :</p> <p>1-SPXTE-3-4 ‡-K-SP-C</p> <p>1-SPXTE4-4-4HP ‡-K-SP-C</p> <p>IL VOUS FAUT : YOU NEED :</p> <p>1-SPXTE3-4-4HP ‡-K-SP-C ‡-K-SP-NR</p> <p>1-SPXTE4-4-4HP ‡-K-SP-C ‡-K-SP-NR</p>

* Voir page 21 pour OPTIONS / See page 21 for OPTIONS

CETTE PAGE CONTIENT LES JEUX NÉCESSAIRES POUR CONVERTIR DES VALVES.

THIS PAGE CONTAINS THE OPTIONS KITS TO MODIFY VALVE.

NUMÉROS NUMBERS	DESCRIPTION
K400D	Jeu de 3-positions de détente <i>3-position detent kit</i>
KSPC	Jeu de bouchon-circuit fermé <i>Closed center plug kit</i>
KSPD	Jeu de 3-positions de détente <i>3-position detent kit</i>
KSPNR	Jeu de conversion - pas de sûreté <i>No relief conversion kit</i>
KSPX	Jeu de conversion de bouchon <i>Conversion plug kit</i>
KSP75Y	Jeu de bague de deuxième retour <i>Power beyond sleeve kit</i>
K2029	Jeu de sûreté standard pour tous les modèles SP, SPXTE, SPK, SPKXTE <i>Standard relief kit for all models SP, SPXTE, SPK, SPKXTE</i>
K2030	Jeu de sûreté "haute pression" pour tous les modèles SP, SPXTE, SPK, SPKXTE <i>High pressure relief kit for all models SP, SPXTE, SPK, SPKXTE</i>

Note : Le no. K400D s'adaptera sur les valves 300 et 400.
The no. K400D will fit on valves 300 and 400.

Note : Les nos. KSPC, KSPD, KSPNR, KSPX & KSP75Y s'appliqueront aux valves SPXTE et SPKXTE.
The options KSPC, KSPD, KSPNR, KSPX & KSP75Y will apply to valves SPXTE and SPKXTE.



POUR INFORMATION SEULEMENT / FOR INFORMATION ONLY

**VALVE CONTRÔLE DIRECTIONNELLE
DIRECTIONAL CONTROL VALVE**

MODÈLE SP
NOMINAL RATING 20 GPM - 2000 P.S.I.

PARALLEL CIRCUIT

The Gresen Model SP Directional Control Valve is manufactured to give outstanding, long-lasting performance. Spools are hone-fitted for above average "load-hold" characteristics.

Model Sp Valves are available either 3-way (single-acting), 4-way (double acting) or with combinations of both.

Monoblock valve housings are available in 1-, 2-, and 3-spool configurations. Optional spools, bonnet assemblies and ports are available on special order.

FEATURES

- Adjustable or non-adjustable Ball / Spring type relief valve.
- Optional model WS differential poppet main relief valve available.
- Built-in load checks - one check for "A" port circuit and one for "B" port circuit.
- Control handles may be mounted in "UP" or "DOWN" position.
(Handles included as standard equipment, except with "A" or "W" options).
- Power beyond outlet available.

SPECIFICATIONS

Capacity Up to 20 GPM (75,70 liters/min)
Maximum pressure 2000 PSI (138,0 bar)

Shipping weight

1-spool 15-1/2 pounds (7,03 kg)
2-spool 24 pounds (10,89 kg)
3-spool 32-1/2 pounds (14,74 kg)



POUR INFORMATION SEULEMENT / FOR INFORMATION ONLY

**VALVE CONTRÔLE DIRECTIONNELLE AVEC POSITION FLOTTANTE
DIRECTIONAL CONTROL VALVE WITH FLOAT POSITION**

MODÈLE SPK
NOMINAL RATING 20 GPM - 2000 P.S.I.

PARALLEL CIRCUIT

The Gresen Model SPK Directional Control Valve is available in 1-spool, 2-spool or 3-spool body configurations. The No.1 spool is always a 4-way float spool. Spools No. 2 and No. 3 are either 3-way or 4-way, the same as in the SP valve.

The float spool is the same as the 4-way, 3-position spool, with the addition of a fourth "Float" position. When in "Float" position, the pump flow is directed to the tank through the open center core. Both work ports are open to the tank.

This spool is spring-centered to Neutral in three positions. The fourth position is a detented Float position which allows a cylinder to "Float" or a motor to "Free Wheel".

Applications for valves with "Float" positions are bulldozers, snow plows and other types of equipment that require a combination of both "Float" and "Hold" when in neutral.

FEATURES

- Detent in Float Position (Spool No. 1 only).
- Adjustable or non-adjustable Ball / Spring type relief valve.
- Model WK differential poppet relief available.
- Built-in load checks - one check for "A" port and one for "B" port circuit.
- Control handles may be mounted in "UP" or "DOWN" position.
- Power beyond outlet available.

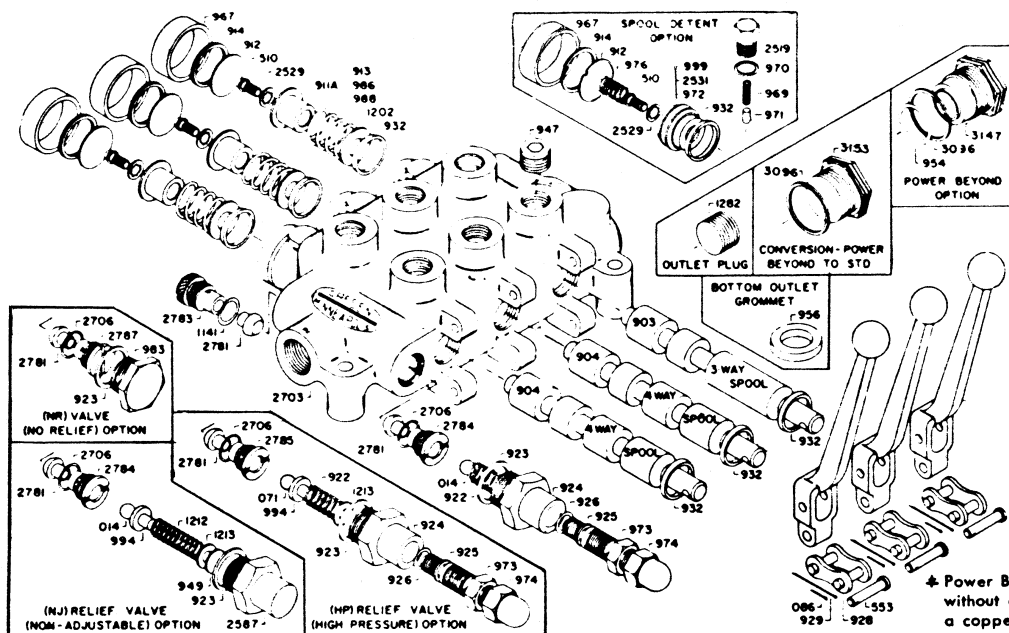
SPECIFICATIONS

Capacity (nominal)	Up to 20 GPM (75,70 liters/min)
Maximum pressure	2000 PSI (138,0 bar)
Shipping weight	
1-spool	17-1/2 pounds (7,94 kg)
2-spool	23-1/2 pounds (10,66 kg)
3-spool	29-1/2 pounds (13,38 kg)

PIECES POUR REPARER

SP3-4-4, SP4-4-4
SPCE3-4-4, SPCE4-4-4
SPYE3-4-4, SPYE4-4-4

MODEL SP
CONTROL VALVE
PARTS LIST



- 2580
- 902
- 902A
- 902B

Gresen Manufacturing Company reserves the right to discontinue products and/or to change design, specifications or prices at any time without incurring any obligations.

NOTE:

All Relief Valve Pressure settings are Full Flow Readings @ 7.6 GPM.

* Power Beyond sleeves and conversion plugs without a groove around the hex nut require a copper gasket for sealing.

Part No.	Description	No. Req'd. (3-Spool)	Part No.	Description	No. Req'd. (3-Spool)
014	Relief Valve Ball (1/2") (to 1500 p.s.i.)	1	SPECIAL PARTS FOR HIGH PRESSURE ADJUSTABLE RELIEF VALVE OPTION (Pressure Range 1501-2000 PSI)		
086	Handle Cotter Pin	3	071	Relief Ball (7/16" Steel)	1
510	Spring Assembly Bolt	3	994	Spring Guide	1
553	Handle Pin	3	1213	Spacer Washer	1
902	Handle (Optional) 5-7/16" Long		2785	Relief Valve Seat (H.P.)	1
902-A	Offset Hdle. (Optional) (R)		SPECIAL PARTS FOR NON-ADJUSTABLE RELIEF (NJ) OPTION (250-1500 PSI)		
902-B	Offset Hdle. (Optional) (L)		949	Shim	As Req'd.
*903	3-Way Spool	(3)	994	Spring Spacer	1
*904	4-Way Spool	(3)	1212	Relief Spring	1
911-A	Stop Collar	3	1213	Washer	1
912	Stop Disc	3	2587	Relief Body (NJ)	1
913	Centering Spring (Std.)	3	SPECIAL PARTS FOR NON-ADJUSTABLE HIGH-PRESSURE (NJ-HP) RELIEF VALVE OPTION.		
914	Stop Disc Snap Ring	3	All relief settings over 1500 PSI have "HP" stamped on the cap. (1501-2000 PSI)		
922	Relief Spring (290-2000 PSI) (Std.)	1	071	Relief Ball (1/4" Steel)	1
923	Relief Body Gasket	1	2583	Relief Spring	1
924	Relief Body	1	2770	Spring Guide	1
925	Adjusting Screw	1	2785	Relief Seat (HP)	1
926	Adjusting Screw "O" Ring	1	SPECIAL PARTS FOR SPOOL DETENT OPTION		
928	Handle Link Assembly	3	969	Detent Spring	1
929	Handle Link Cotter Pin	3	970	Detent Cap Washer	1
932	Spool Seal	6	971	Detent Pin	1
947	3-Way Port Plug	3	972	Detent Spool Adapter (3-Pos.)	(1)
953	Relief Spring (145-400 PSI) (Opt.)	1	2531	Detent Spool Adapter (2-Pos.)	(1)
967	Rubber Bonnet	3	999	Detent Spool Adapter (1-Pos.)	1
973	Adj. Screw Jam Nut	1	976	Det. End Cap Retainer Spring	1
974	Acorn Cap	1	2519	Detent Cap	1
986	Heavy Centering Spring (Opt.)	1	SPECIAL PARTS FOR CONTROLS W/OUT RELIEF VALVE		
988	Light Centering Spring (Opt.)	1	983	Relief Plug Cap	1
1141	Check Plug "O" Ring	1	2787	Relief Seat Plug (N.R.)	1
1202	Stop Washer	3	SPECIAL PARTS FOR "POWER BEYOND" OPTION		
2529	Cent. Spring Lockwasher	3	954	Power Beyond Sleeve Nose Seal	1
2580	Handle (Standard) 6-3/8" Long	3	3096	Power Beyond Sleeve Seal	1
*2701	Valve Housing (1-Spool)	(Opt.)	3147	Power Beyond Sleeve	1
*2702	Valve Housing (2-Spool)	(Opt.)	* 952	Copper Gasket	1
*2703	Valve Housing (3-Spool)	(Opt.)	MISCELLANEOUS		
2706	Relief Valve Seat "O" Ring	1	956	Rubber Grommet (Bottom Outlet)	1
2781	Check Poppet	2	1282	3/4" Outlet Plug	
2783	Check Plug	1	2796	Rear Check Spring	
2784	Relief Valve Seat (to 1500 psi)	1	3154	Closed Center Plug	1
OPTIONAL VALVE SPOOLS			3153	Conversion Plug	(See Form 373) 1
*2891	4-Way (Z) Metering	(Opt.)			
*2896	3-Way (Z) Metering	(Opt.)			
OPTIONAL VALVE SPOOLS					
*905	4-Way (C) Closed Cent. Spool	(Opt.)			
*906	4-Way (F) Free Flow Spool	(Opt.)			

*Housing and spools cannot be ordered as separate items. All spools are fitted to individual housing by select hone process at factory.

PIECES POUR REPARER

SPK3-4-4, SPK4-4-4



MODEL SPK
CONTROL VALVE
W/FLOAT

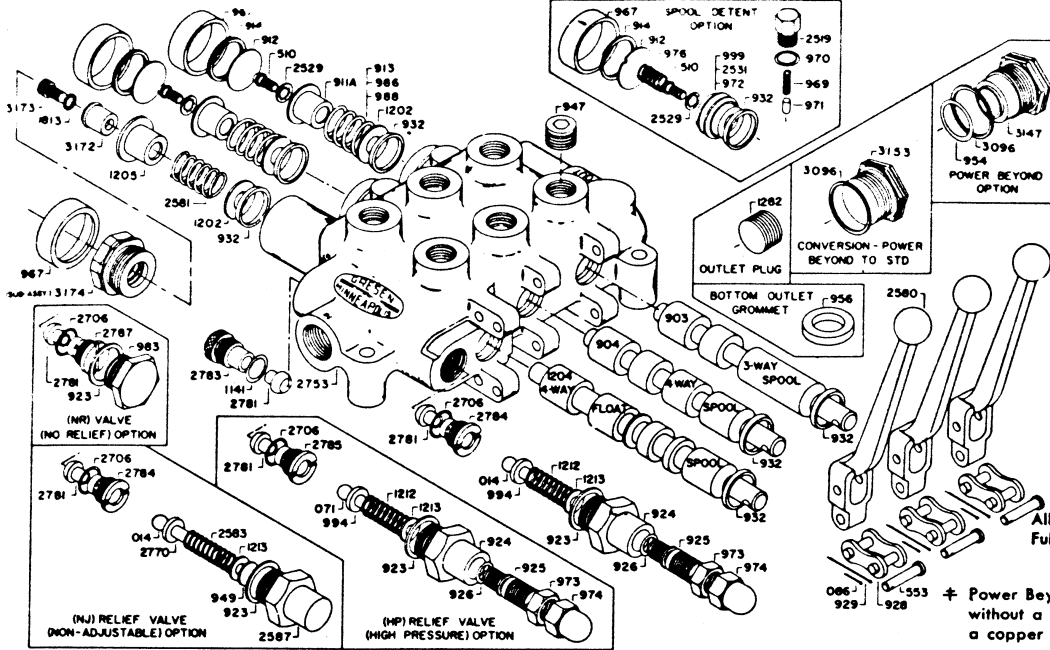
PARTS
LIST

Gresen Manufacturing Company reserves the right to discontinue products and/or to change design, specifications or prices at any time without incurring any obligations.

NOTE:

All Relief Valve Pressure settings are Full Flow Readings @ 7.6 GPM.

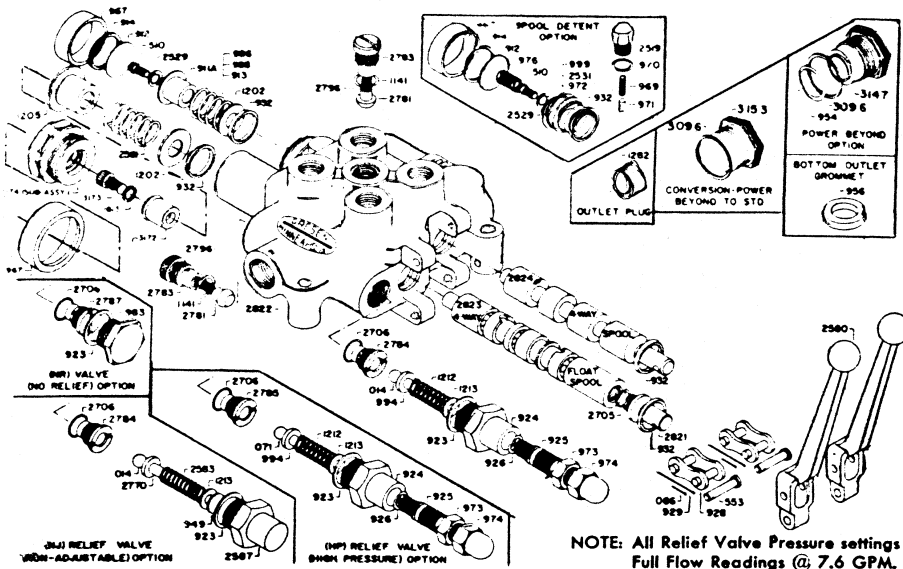
† Power Beyond sleeves and conversion plugs without a groove around the hex nut require a copper gasket for sealing.



Part No.	Description	No. Req'd.	Part No.	Description	No. Req'd.
014	Relief Valve Ball (1/2" Steel)	1		SPECIAL VALVE SPOOLS (Not Available on Float)	
086	Handle Cotter Pin	3	*905	4-Way Closed Cent. Spool	
510	Spring Assy. Bolt	2	*906	4-Way Free Flow Spool	
553	Handle Pin	3		SPECIAL PARTS FOR HIGH PRESSURE (H.P.)	
*903	3-Way Spool			ADJUSTABLE RELIEF VALVE OPTION	
*904	4-Way Spool	(2)		(Pressure Range 1501-2000 PSI)	
911-A	Stop Collar	2	071	Relief Valve Ball (7/16")	1
912	Stop Disc	2	1213	Washer	2
913	Centering Spring	2	2785	Relief Valve Seat (H.P.)	1
914	Stop Disc Snap Ring	2		SPECIAL PARTS FOR NON-ADJUSTABLE RELIEF (N.J.) OPTION	
923	Rel. Valve Body Gasket	1		(400-1500 PSI)	
924	Rel. Valve Body	1	949	Shim	
925	Adjusting Screw	1	1213	Washer	As Req'd.
926	Adj. Screw "O" Ring	1	2583	Relief Valve Spring	1
928	Handle Link Assembly	3	2587	Relief Valve Body (NJ)	1
929	Handle Link Cotter Pin	3	2770	Spring Guide	1
932	Spool Seal	6		SPECIAL PARTS FOR NON-ADJUSTABLE HIGH-PRESSURE (NJ-HP) RELIEF VALVE OPTION.	
947	Port Plug (3-Way Only)			All relief settings over 1500 PSI shall have "HP" stamped on the cap.	
967	Rubber Bonnet	3		(1501-2000 PSI)	
973	Adj. Screw Jam Nut	1	071	Relief Ball 7/8" Steel	1
974	Acorn Cap	1	2741	Relief Spring	1
986	Heavy Centering Spring (Opt.)		2785	Relief Seat (HP)	1
988	Light Centering Spring (Opt.)			SPECIAL PARTS FOR SPOOL DETENT OPTION	
994	Ball Seat Spring Spacer	1		(Not Available on Float)	
1141	Check Plug "O" Ring	1	969	Detent Spring	1
1202	Stop Washer	3	970	Detent Spring Washer	1
*1204	Float 4-Way Spool	1	971	Detent Pin	1
1205	Float Spring Collar	1	972	Detent Spool Adapter (3-Pos.)	1
1212	Relief Spring	1	976	Det. End Cap Retainer Spg.	1
1213	Relief Spring Washer	1	999	Detent Spool Adapter (1-Pos.)	1
1813	Float Assy. Lockwasher	1	2519	Detent Cap.	1
2529	Cent. Spring Lockwasher	2	2531	Detent Spool Adapter (2-Pos.)	1
2580	Handle	3		SPECIAL PARTS FOR CONTROLS W/OUT RELIEF VALVE	
2581	Float Centering Spring	1	983	Relief Valve Plug Cap	1
2706	Rel. Valve Seat "O" Ring	1	2787	Relief Seat Plug (N.R.)	1
*2711	Valve Housing (1-Spool)	(1)		SPECIAL PARTS FOR "POWER BEYOND" OPTION	
*2712	Valve Housing (2-Spool)	(1)	954	Power Beyond Sleeve Nose Seal	1
*2753	Valve Housing (3-Spool)	1	3096	Power Beyond Sleeve Seal	1
2781	Check Poppet	2	3147	Power Beyond Sleeve	1
2783	Check Plug	1	† 952	Copper Gasket	1
2784	Relief Valve Seat	1		MISCELLANEOUS	
3172	Float Detent Plunger	1	956	Rubber Grommet (Bottom Outlet)	1
3173	Cap Screw	1	1282	3/4" Outlet Plug	1
3174	Float Detent Sub-Assembly	1	3154	Closed Center Plug	1
			3153	Conversion Plug Opt'l. (See Form 373)	1

*NOTE: Housings and spools may not be ordered as separate items. All spools are fitted to individual housings by select hone process at factory.

PIECES POUR REPARER SSK4-4



**SSK (2-SPOOL)
"SERIES CIRCUIT"
CONTROL VALVE
W/FLOAT**

PARTS LIST

◆ NOTE: Power Beyond sleeves and conversion plugs without a groove around the hex nut require a copper gasket for sealing. A seal cannot be used with a sleeve or plug requiring a copper gasket or vice versa.

Gresen Manufacturing Company reserves the right to discontinue products and/or to change design, specifications or prices at any time without incurring any obligations.

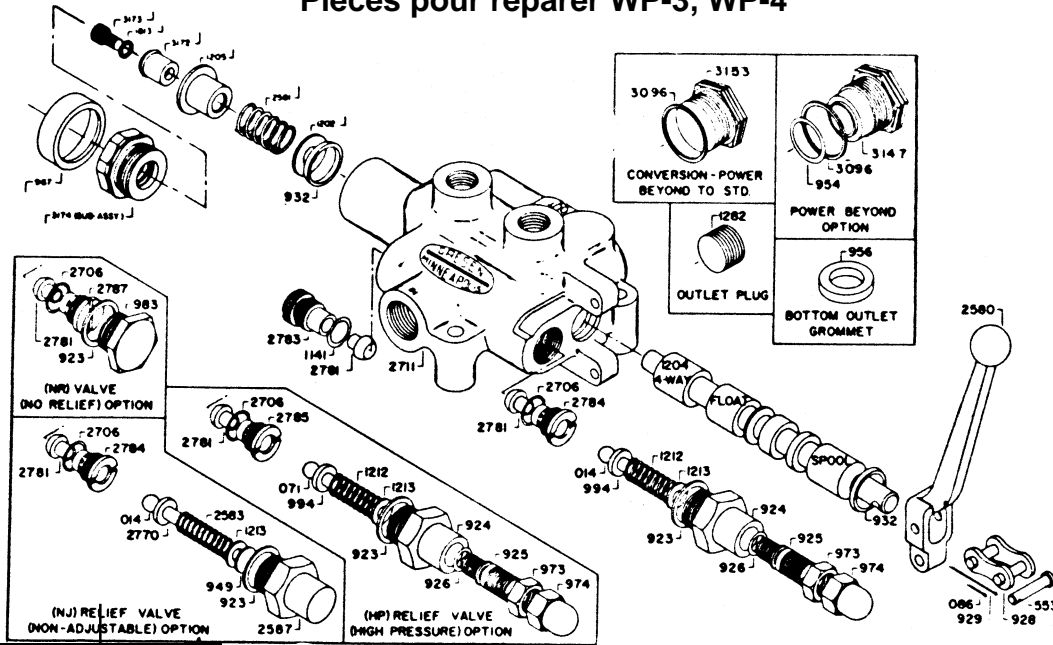
(WHEN ORDERING PARTS, IF POSSIBLE SHOW VALVE HOUSING CASTING NUMBER.)

PART NO.	DESCRIPTION	NO. REQ'D.	PART NO.	DESCRIPTION	NO. REQ'D.
014	Relief Valve Ball (1/2" Steel)(to 1500 PSI)	1	SPECIAL PARTS FOR ADJUSTABLE HIGH PRESSURE (H.P.) RELIEF VALVE OPTION		
086	Handle Cotter Pin	2	(Pressure Range 1501-2000PSI)		
510	Spring Assy. Bolt	1	071	Relief Valve Ball (7/16")	1
553	Handle Pin	2	2785	Relief Valve Seat	1
911A	Stop Collar	1	SPECIAL PARTS FOR NON-ADJUSTABLE RELIEF (N.J.) OPTION		
912	Stop Disc	1	(Pressure Range 400-1500PSI)		
913	Centering Spring (Standard)	1	949	Shim	As Req'd.
914	Stop Disc Snap Ring	1	1213	Washer	1
923	Relief Valve Body Gasket	1	2583	Relief Valve Spring	1
924	Relief Valve Body	1	2587	Relief Valve Body (N.J.)	1
925	Adjusting Screw	1	2770	Spring Guide	1
926	Adjusting Screw O-Ring	1	SPECIAL PARTS FOR NON-ADJUSTABLE HIGH-PRESSURE (NJ-HP) RELIEF VALVE OPTION.		
928	Handle Link Assembly	2	All relief settings over 1500 PSI shall have "HP" stamped on the cap. (1501-2000 PSI)		
929	Handle Link Cotter Pin	2	071	Relief Ball 7/8" Steel	1
932	Spool Seal	4	2741	Relief Spring	1
967	Rubber Gasket	2	2785	Relief Seat (HP)	1
973	Adjusting Screw Jam Nut	1	SPECIAL PARTS FOR SPOOL DETENT OPTION		
974	Acorn Cap	1	(Not available on #1 Spool Float Section)		
986	Heavy Centering Spring (Optional)	1	969	Detent Spring	1
988	Light Centering Spring (Optional)	1	970	Detent Spring Washer	1
994	Ball Seat Spring Spacer	1	971	Detent Pin	1
1141	Check Ball Plug O-Ring	2	972	Detent Spool Adapter (3-Pos.)	1
1202	Stop Washer	2	2531	Detent Spool Adapter (2-Pos.)	1
1205	Float Spring Collar	1	999	Detent Spool Adapter (1-Pos.)	1
1212	Relief Spring	1	976	Det. End Cap Retainer Spring	1
1213	Relief Spring Washer	1	2519	Detent Cap	1
1813	Float Assy. Lockwasher	1	SPECIAL PARTS FOR CONTROLS WITHOUT RELIEF VALVE (NR)		
2529	Centering Spring Lockwasher	1	983	Relief Valve Plug Cap	1
2580	Handle	2	2787	Relief Valve Seat Plug	1
2581	Float Centering Spring	1	SPECIAL PARTS FOR "POWER BEYOND" OPTION		
2705	Float Spool Adapter Seal	1	3147	Power Beyond Sleeve	1
2706	Relief Valve Seat O-Ring	1	3096	Power Beyond Sleeve Seal	1
2781	Check Poppet	2	954	Power Beyond Sleeve Nose Seal	1
2783	Check Ball Plug	2	952	Copper Gasket	1
2784	Relief Valve Seat (to 1500 PSI)	1	MISCELLANEOUS		
2796	Check Poppet Spring	2	956	Rubber Grammet (Bottom Outlet)	1
2821	Float Spool Adapter	1	1282	3/4" Outlet Plug	1
*2822	Valve Housing	1	3153	Conversion Plug	1
*2823	Float 4-Way Spool	1			
*2824	4-Way Spool	1			
3172	Float Detent Plunger	1			
3173	Cap Screw	1			
3174	Float Detent Sub-Assembly	1			

*NOTE: Housings and spools may not be ordered as separate items. All spools are fitted to individual housings by select hone process at factory.

SPK (1 SPOOL) CONTROL VALVE W/FLOAT

Pièces pour réparer WP-3, WP-4



Part No.	No. Req'd
014	1
086	1
553	1
923	1
924	1
925	1
926	1
928	1
929	1
932	2
952	1
967	1
973	1
974	1
986	
988	
994	1
1141	1
1202	1
*1204	1
1205	1
1206	1
1207	1
1208	3
1209	1
1210	
1211	1
1212	1
1213	As Req'd
1214	1
1215	1
2580	1
2581	1
2686	1
2706	1
*2711	1
2781	2
2783	1
2784	1

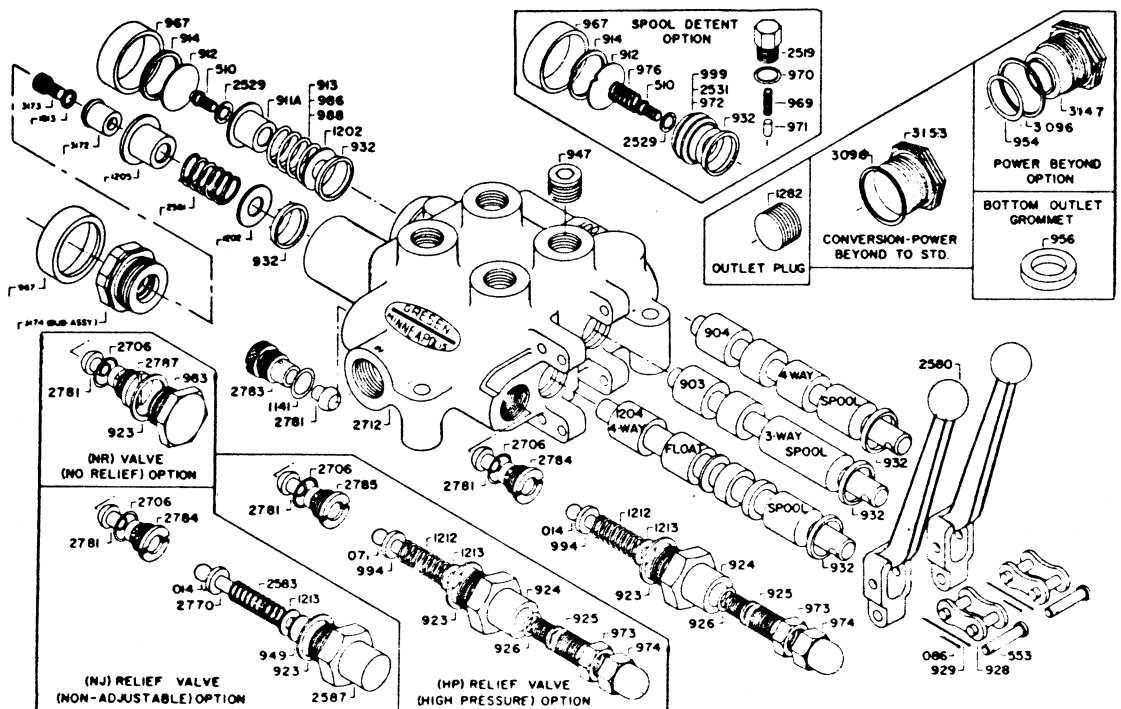
Part No.	No. Req'd
014	1
086	2
510	1
553	2
*903	{
*904	
911-A	1
912	1
913	1
914	1
923	1
924	1
925	1
926	1
928	2
929	2
932	4
947	
952	1
967	2
973	1
974	1
986	
988	
994	1
1141	1
1202	2
1204	1
1205	1
1206	1
1207	1
1208	3
1209	1
1210	
1211	1
1212	1
1213	As Req'd
1214	1
1215	1
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2706	1
*2712	1
2781	2
2783	1
2784	1

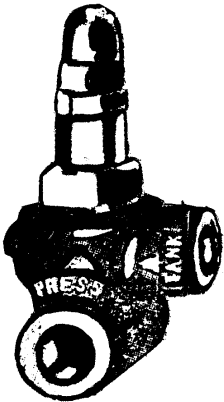
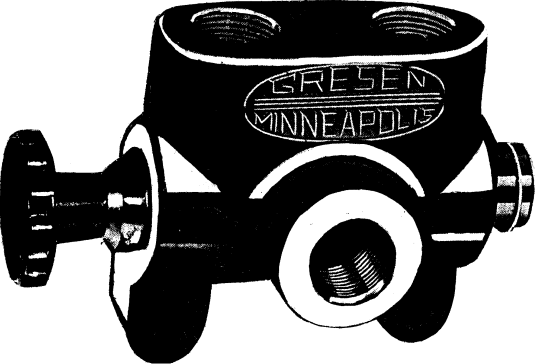
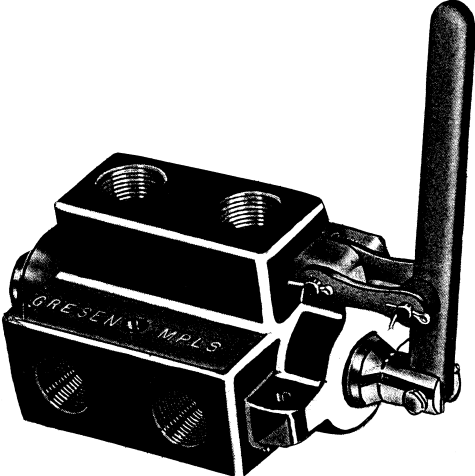
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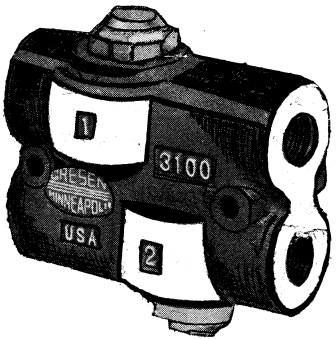
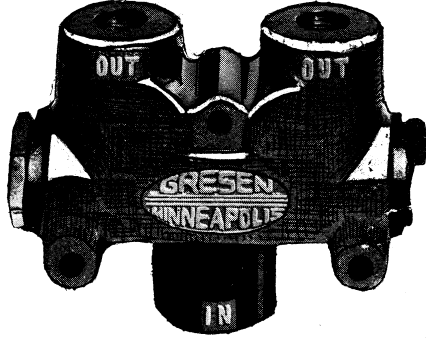
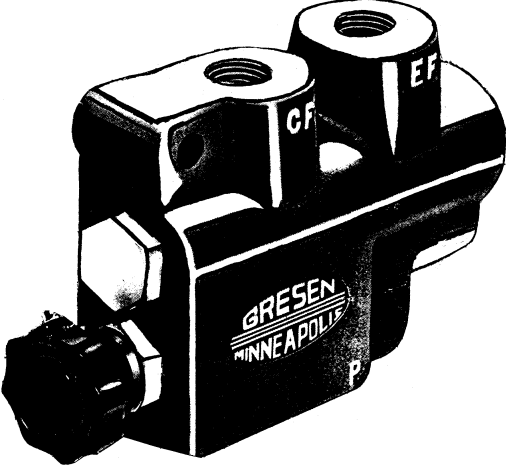
- Voir au verso pour la description des pièces
See reverse side for parts description
- Pour les pièces optionnelles SPÉCIALES, voir la deuxième colonne au verso (No. Req'd." est le même pour tous les modèles)
For SPECIAL Optional Parts, see 2nd column on reverse side.
("No. Req'd." is the same for all models.)

SPK (2 SPOOL) CONTROL VALVE W/FLOAT

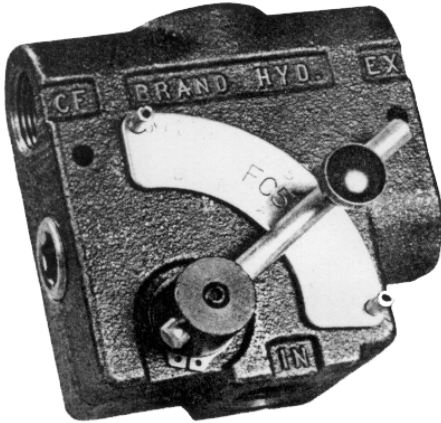
Pièces pour réparer WP-3-4, WP-4-4



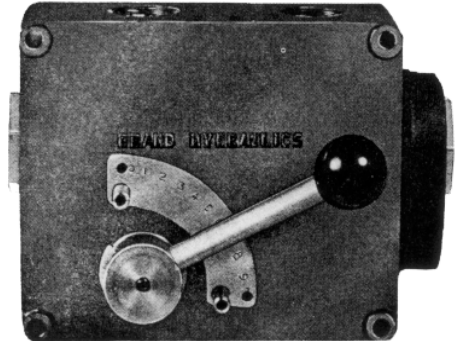
ILLUSTRATIONS	NUMÉROS NUMBERS	DESCRIPTION
	<p>JL50</p> <p>K75</p>	<p>Clapet de décharge Relief valves</p> <p>Ajustable de 145 à 1500 PSI, 3 ouvertures, grandeur 1/2", filetage tube.</p> <p>Ajustable de 400 à 2000 PSI. Capacité jusqu'à 38 GPM, ouverture 3/4" NPT.</p>
	<p>S50</p> <p>S75</p> <p>S100</p>	<p>Valves sélectrices Selector valves</p> <p>Pour opérer 2 systèmes hydrauliques avec une seule pompe.</p> <p>Valve sélectrice, 15 GPM Entrées et sorties 1/2" NPT Openings : 1/2" N.P.T.</p> <p>Valve sélectrice, 24 GPM Entrées et sorties 3/4" NPT Openings : 3/4" N.P.T.</p> <p>Valve sélectrice, 40 GPM Entrées et sorties 1" NPT Openings : 1" N.P.T.</p>
	<p>DS75</p>	<p>Double valve sélectrice Double selector valve</p> <p>Sélecteur double pour opérer 2-gangs de cylindres avec une seule valve de contrôle.</p> <p><i>Double selector valve to operate 2 gangs of cylinders with only one control valve.</i></p>

NUMÉROS NUMBERS	DESCRIPTION	ILLUSTRATIONS
<p>DWV50</p>	<p>Valves “cushion” Cushion valves</p> <p>Pour diminuer les coups de pression dans le système hydraulique. Particulièrement recommandé avec moteurs hydrauliques.</p> <p>Capacité 30 GPM. Ouvertures : 1/2” N.P.T. <i>Capacity 30 GPM.</i> <i>Openings : 1/2” N.P.T.</i></p> <p><i>Specially recommended with hydraulic motors.</i></p>	
<p>PD50</p> <p>PD75</p>	<p>Diviseur de flot Flow dividers</p> <p>Diviseur de flot 50-50.</p> <p>Le flot d’huile est divisé en 2 parties égales.</p> <p>Capacité de 5 à 20 GPM Ouvertures : 1/2” N.P.T. <i>Capacity 5 to 20 GPM.</i> <i>Openings : 1/2” N.P.T.</i></p> <p>Capacité de 15 à 35 GPM Ouvertures : 3/4” N.P.T. <i>Capacity 15 to 35 GPM.</i> <i>Openings : 3/4” N.P.T.</i></p>	
<p>CFDA50</p> <p>CFDA75</p>	<p>Diviseur ajustable de flot Adjustable flow divider</p> <p>CF : Flot constant est ajustable de 0 à 15 GPM. Le surplus retournera au réservoir par EF. Il n’y a pas de pression sur le surplus qui retourne au réservoir, il ne peut pas être utilisé pour opérer un système hydraulique.</p> <p>Diviseur ajustable de flot. Ouvertures : 1/2” N.P.T. <i>Openings : 1/2” N.P.T.</i></p> <p>Diviseur ajustable de flot. Ouvertures : 3/4” N.P.T. <i>Openings : 3/4” N.P.T.</i></p>	

Full Range Flow Control FC-Series (2 or 3 Port Styles)



Recommended Flow Rate	
Ports	GPM Input
3/8" NPT	2-8
1/2" NPT	8-16
3/4" NPT	16-30
1" NPT	30-40
1 1/4" NPT	40-60
1 1/2" NPT	60-90

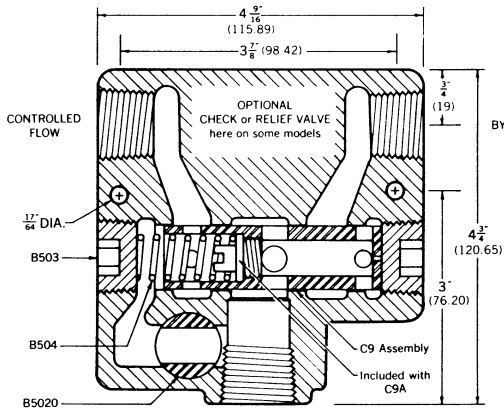


FC51 Flow control
R-51 relief for controlled flow.
C-55 returned flow thru check valves.

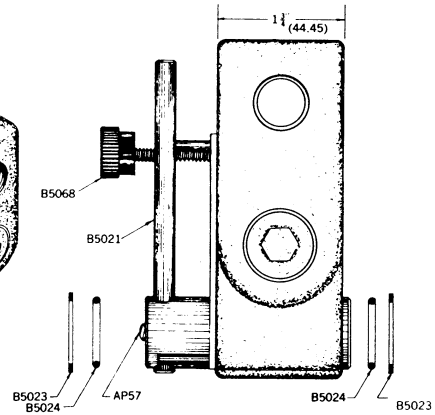
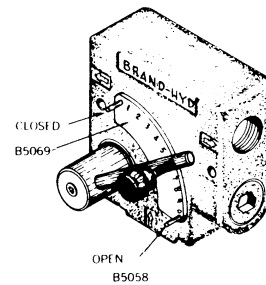
3/8" - 1/2" - 3/4"

1" - 1 1/4" - 1 1/2"

These valves are full range pressure compensating variable flow control valves. Rotating the volume lever changes the orifice size which varies the pressure drop across our spring loaded metering spool. The flow out the "controlled flow" port is therefore proportional to the orifice diameter which can be completely closed to wide open. A dash pot dampens the spool movement to eliminate spool hunting. The output flow is smooth and constant regardless of pressure changes on the "controlled flow" line. Both outlets flows are pressure compensated. Maximum recommended pressure is 3000 PSI. For satisfactory operation we recommend 30 micron filtration or better.



3/8", 1/2", 3/4" FC Valve

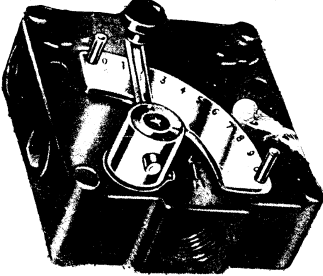
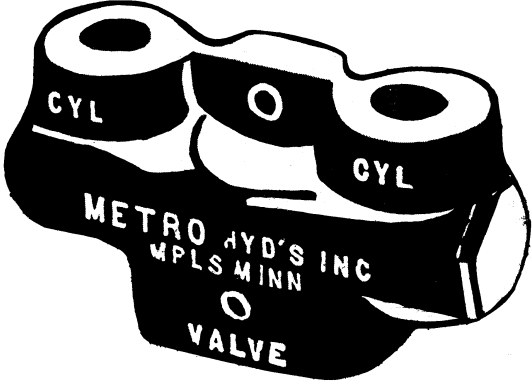
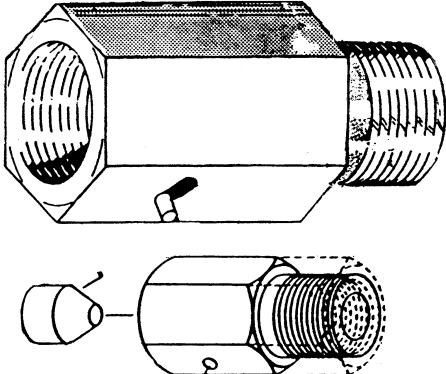



AP57 Set Screw
B503 Pipe Plug 3/4" NPT
B504 Metering Spring

B5020 Side Lever Spool (State Valve Size)
B5021 Handle
B5023 Snap Ring
B5024 "O" Ring — 116

B5058 Roll Pin 3/16" x 7/8"
B5068 Thumb Screw
B5069 Dial Plate 3/8" - 3/4" Valve
C-9A Metering Spool

NUMÉROS NUMBERS	DESCRIPTION
FC51-3/8	Valve de contrôle de débit 3/8" NPT - <i>Flow control valve 3/8" NPT</i>
FC51-1/2	Valve de contrôle de débit 1/2" NPT - <i>Flow control valve 1/2" NPT</i>
FC51-3/4	Valve de contrôle de débit 3/4" NPT - <i>Flow control valve 3/4" NPT</i>

NUMÉROS NUMBERS	DESCRIPTION	ILLUSTRATIONS
<p>FCV75</p>	<p>Flow control valve 3/4" NPT-0-30 GPM 3000 PSI</p> <p>The FCV75 flow control valve is a full range variable volume pressure compensating flow control valve. Rotating the volume lever changes the orifice size which varies the pressure drop across the spring loaded metering spool.</p> <p>"Flow control valve" ajustable de 0 à 30 G.P.M. Grosseur du trou : 3/4" N.P.T. Ajustable from 0 to 30 G.P.M. Port sizes : 3/4" N.P.T.</p>	<p>ENERGY HYDRAULICS</p> 
<p>409B</p>	<p>Lock valve</p> <p>Lock valves are designed to lock a cylinder, or part of a circuit, without leakage when the control valve is in neutral position. Connected between a control valve and a cylinder, the lock valve serves as a check that permits flow to the cylinder but blocks return flow until pilot pressure is applied to "unlock" the valve.</p> <p>Lock valves are commonly used as safety devices to prevent dropping of elevated loads if a valve is inadvertently operated with control power off.</p> <p>"Lock valve" pour cylindres double action. Grosseur du trou : 1/2" N.P.T. For double acting cylinders. Port sizes : 1/2" N.P.T.</p>	
<p>to 3000 PSI.</p> <p>LT50-OW</p> <p>LT75-OW</p>	<p>Check valve</p> <p>The "CKV" check valves allow an unrestricted flow of oil in one direction, but check flow from reversing back through the line. For pressure up to 3000 PSI.</p> <p>"Check valve" lorsqu'installé sur la ligne de pression, il permet le flot d'huile dans une seule direction. Grosseur du trou : 1/2" N.P.T. Port sizes : 1/2" N.P.T.</p> <p>"Check valve" 3/4" N.P.T. / Port sizes : 3/4" N.P.T.</p> <p>"Check valve" peut devenir restricteur en perçant un trou dans le "poppet". Le "poppet" de LT50 peut être percé de 1/16"; celui de LT75 peut être percé de 3/32" à 7/32".</p>	

NUMÉROS NUMBERS	DESCRIPTION	ILLUSTRATIONS
<p>FA203</p> <p>K23012</p> <p>K25001</p> <p>K23011</p>	<p>Filtre à l'huile hydraulique Hydraulic oil filter</p> <p><i>For installation in either the return line (between control valve outlet and tank), or suction line (between tank and pump inlet.)</i></p> <p>NOTE : Before installing : IN RETURN LINE - make certain that valves in circuit can withstand back pressure which will be created by the filter. IN SUCTION LINE - check with pump manufacturer to make certain the pump can withstand the additional restriction which be created by the filter. Do not use over 5 PSI by-pass spring unless approved by pump manufacturer.</p> <p>Filtre assemblé sans cadran indicateur pour le remplacement de l'élément. 1-1/2" N.P.T. Élément en papier 33 microns no. K23012 <i>Filter assy less indicator.</i></p> <p>Élément en papier 33 microns (non réutilisable). <i>Throw away type. Ref. K23012.</i></p> <p>Élément en coton 100 "mesh" (149 microns) réutilisable. <i>Reusable type. Ref. K25001.</i></p> <p>Élément en coton 60 "mesh" (260 microns) crépine réutilisable. <i>Wire cloth reusable type.</i></p>	<p>SPÉCIFICATIONS : Étendue de filtrage</p> <ul style="list-style-type: none"> • 1400" cube (élément papier) (10 ou 33 microns) • 200" cube (élément de crépine) (60 ou 100 "mesh") • 300" cube (élément de crépine) (100 "mesh") 
<p>FA103</p> <p>K22001</p> <p>K22002</p>	<p>Étendue de filtrage : 642 pouces cube Filtering area : 642 cubic inches</p> <p>Filtre assemblé 3/4" N.P.T. mais sans le cadran indicateur. <i>Filter assembly 3/4" N.P.T. but less indicator.</i></p> <p>Élément vissé en papier 10 microns. <i>Paper filter 10 mesh.</i></p> <p>Élément vissé en papier 33 microns. <i>Paper filter 33 mesh.</i></p>	