



TO INFORM YOU

PRODUCT  
SUPPORT  
BULLETIN # 383

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**TO:** AUTHORIZED *Portable Electric Tool* SERVICE STATIONS  
*factory* SERVICE CENTERS  
SALES COMPANIES

**DATE:** JULY, 2002

**TOOL(S) \ PRODUCT(S) AFFECTED**

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**SUBJECT: GREASE STANDARDS CHART – GCS-5**

Attached is an updated grease standard chart GSC-5, which lists the **Type** and **Weight** (*in ounces*) of grease for the gear case and mechanisms of all Milwaukee products. A brief description of Milwaukee grease proprieties, categorizing them by their type & typical application is shown on page 1.

**GREASE** – grease is a critical factor in keeping Milwaukee products operating at peak efficiency. Every tool requires the correct lubrication to protect its moving parts. Specific types of applications require grease with specific features. The specification of the proper grease depends upon composition and performance, to prevent wear, to reduce friction, to aid in distributing loads and to prevent corrosion.

Grease places a thin film of lubricant between two moving parts and separates moving surfaces that are under extreme pressure. This permits the parts to travel on the film and move smoothly past each other. The wrong grease will cause early wear out of critical parts and reduce the useful life of gears, bearings and mechanisms.

This bulletin superseded & replaces PRODUCT SUPPORT BULLETIN #359

This bulletin is for informational purposes. PLEASE PLACE IN SERVICE PARTS LIST MANUAL 'INDEX' AREA.



## GREASE STANDARD CHART

**GSC-5**

### LUBRICATION - GREASE – Proper Selection and Use of Milwaukee Grease

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The following is a brief description of Milwaukee Grease properties that categorize these lubricants by type and typical application.

TYPE	APPLICATION
A	all-purpose lubrication used in areas of non-critical sliding contact applications.
B	thick bearing type lubricant used in areas of non-critical sliding contact applications.
C	Obsolete - Replaced By Type G
D	Obsolete - Replaced By Type G
E	all-purpose lubricant with special additives that help support lubrication in medium loading and moderate to high torque conditions. Contains extreme pressure oils to minimize metal-to-metal contact, preventing scoring of parts.
F	Obsolete - Replaced By Type S2
G	special purpose lubricant, with special oil and solid additives that help support in areas of severe loading in high torque. G-Grease can be used in applications where E-Grease may not be enough to support the load & torque conditions.
H	Obsolete - Replaced By Type S2
J	polyurea base lubricant that is very stable in shear type applications. Note: polyurea base is not compatible with other grease bases and should not be mixed.
K	Obsolete - Replaced By Type S2
L	special Teflon additive grease that helps supports the lubricant in areas of critical sliding contact. Contains extreme pressure oils to minimize metal-to-metal contact, preventing scoring of parts. A good all-purpose gear lube.
M	Obsolete - Replaced By Type S2
N	Obsolete - Replaced By Type S2
O	Obsolete - Replaced By Type Y
P	general-purpose lubricant used in areas of non-critical contact applications.
Q	semi-fluid lubricant used in certain Hammer applications.
R	Obsolete - Replaced By Type Y
S	Obsolete - Replaced By Type S2
S2	aluminum complex base lubricant with teflon specific oils added for supporting areas of critical sliding contact and a copper corrosion inhibitor added. Helps minimize metal-to-metal contact and prevent scoring of parts.
T	special Teflon additive helps support the lubricant in areas of critical sliding contact, and Molydisulfide additive for greater wear properties.
U	anti-seize compound containing graphite and moly-disulfide. This lubricant is used in severe loading conditions.
W	Obsolete - Replaced By Type S2
Y	lithium 12 type base lubricant good in supporting areas of severe loading in high torque.
Z	aluminum complex base lubricant helps support the lubricant in areas of critical sliding contact, and Molydisulfide additive for greater wear properties.
Worm Drive OIL	90 weight heavy-duty gear oil with special anti-wear and tackiness additives

#### Grease Consistency Rating

NLGI* Consistency		Milwaukee Grease Type	Consistency Rating	Milwaukee Grease Type	Consistency Rating
Number	Appearance	A	2	Q	Semi-fluid
0	very soft	B	3-1/2	R	0
1	soft	E	2	S2	1-1/2
2	medium	G	1	T	2
3	medium hard	J	2	U	3
4	hard	K	1-1/2	Y	1
5	very hard	L	2	Z	1
6	block type	O	0		
		P	2		

\* National Lubricating Grease Institute

Consistency of grease is roughly equivalent to viscosity in oil. The consistency of grease is important because grease must reach the parts to be lubricated at all times. Too heavy of grease will "channel" - stay in a fixed ridge or hollow and will not provide proper lubricating action; in turn, results in failure of the parts.

Milwaukee Grease is available in the following amounts and containers:

TYPE	MISC TUBES	1/2 LB	1 LB	7- 1/2 LB	35 LB
A		49-08-0500	49-08-0800		49-08-3600
B		49-08-0600	49-08-0900	49-08-2000	
E			49-08-4122		49-08-3952
G			49-08-4140		49-08-4145
J			49-08-4220	49-08-2010	
L		49-08-4170	49-08-4175	49-08-4180	
P	1-1/2oz 49-08-4250				
Q	1-1/2oz 49-08-4255				
S2	7oz 49-08-5265		49-08-5267		
T			49-08-4290		
U	2oz 49-08-0150				
Y	6oz 49-08-5270				
Z			49-08-7650		

The following is the Grease TYPE and WHERE USED for Milwaukee *portable electric power tools*.

CATALOG	SERIALNO	TYPE	WEIGHT	WHERE USED				
0100	72	E	1/2	0232-1	832	E	1-1/4	
0100-20	058	Y	1/4	0234-1	532-1001	E	1-1/4	
0101	376	E	1/2	0234-1, -75	532-100500, 987	E	1-1/2	
0101-20	064	Y	1/4	0235	615	E	1-1/4	
0102	402	E	1/2	0235-1, -20	755, 978	E	1-1/2	
0102-1	428-1001	E	1/2	0238-1	723	E	1-1/2	
0102-1	428-189500	E	1-1/4	0239-1	756	E	1-1/2	
0104-1	573-1001	E	1-1/4	0244-1	664	E	1-1/2	
0104-1	573-17000	E	1-1/2	0270	80	E	1-1/4	
0106-1	575	E	1-1/2	0290	81	E	1-1/4	
0120	90	E	1-1/4	0300-20	070	Y	5/8	
0121	377	E	1-1/4	0301-20	071	Y	5/8	
0122	403	E	1-1/4	0302-20	084	Y	5/8	
0122-1	429	E	1-1/4	0310	82	E	1-1/4	
0124-1	603-1001	E	1-1/4	0330	83	E	1-1/4	
0124-1	603-5000	E	1-1/2	0350	79	E	1-1/4	
0135	614	E	1-1/4	0370	78	E	1-1/4	
0140	91	E	1-1/4	0375-1	611	E	1/3	
0141	479	E	1-1/4	0379-1	761	E	1/3	
0141-1	708	E	1-1/4	0380-1	807	E	1/3	
0160	92	E	1-1/4	0381-1		E	1/10	
0161	480	E	1-1/4	0384-1	833	E	1/10	
0180	93	E	1-1/4	0386-1	809	E	1/10	
0181	393	E	1-1/4	0391-1	764	E	1/10	
0190	304	E	1-1/4	0394-1	765	E	1/10	
0191	394	E	1-1/4	0396-1	783	E	1/10	
0200	89	E	1-1/4	0398-1	778	E	1/10	
0200-20	065	Y	5/8	0401-1	784	E	1/10	
0201-20	067	Y	5/8	0420	223	A	1-1/4	
0202-20	069	Y	5/8	0420-1	851	A	1/2	
0210-1	588	A	1/3	0435-1	848	E	1/2	
0212-1		A	1/3	0440	224	A	1-1/4	
0214-1		A	1/3	0445-1	849	E	1/2	
0216-1		S	1/10	0455-20	911	E	1/10	EA CARRIER
0218-1		S	1/10	0456-20	912	E	1/10	EA CARRIER
0220	88	E	1-1/4	0478-1	864	E	1/10	EA CARRIER
0221	378	E	1-1/4	0480	226	A	1-1/4	
0222	404	E	1-1/4	0500	222	A	1-1/4	
0222-1	430	E	1-1/4	0501-02	900	E	1/10	EA CARRIER
0224-1	574-1001	E	1-1/4	0502-02	901	E	1/10	EA CARRIER
0224-1	574-51000	E	1-1/2	0511-21	943	E	1/10	EA CARRIER
0225	316	E	1-1/4	0512-21	944	E	1/10	EA CARRIER
0225-1	796	E	1-1/2	0513-21	945	E	1/10	EA CARRIER
0227-1	831	E	1-1/8	0514-20	998	E	1/10	EA CARRIER
0228-1	689	E	1-1/2	0516-20	999	E	1/10	EA CARRIER
0229-1	820	E	1-1/2	0520	221	A	1-1/4	
0230-1	732	E	1-1/2	0521-20	951	E	1/10	EA CARRIER
				0522-20	952	E	1/10	EA CARRIER